# An Empirical Investigation into Top Management Turnover in UK Quoted Companies

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Submitted for the qualification of Doctor of Philosophy in Industrial and Business Studies


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November 2001

*To my father and mother*

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# Acknowledgements

I always thought that a Ph.D. is more than a piece of unique research work rigorously accomplished. It's about setting goals and delivering outputs; learning to be persistent, patient, inquisitive, and above all optimistic. It is a unique "journey", during which, however, you are not alone. Instead there are many people there to help you and support you over the years.

Above all those people I am grateful to my supervisors, Martin Conyon and Mike Devereux, for their guidance and support during this "journey". Each, on his own way, challenged my thinking. Martin's professionalism and commitment overpass the barrier of the Atlantic that separated us. Mike's teaching ability not only helped me to understand the most complicated things but most importantly gave me a role model to aspire to.

Secondly, I'd like to thank two people without whose help this thesis would not have seen the light of the day. These are, first of all, Graham Sadler. He has been a constant source of support, providing a lot of helpful suggestions, and someone to play "office" basketball when I really needed a break. Finally, I could not forget Laura Read to whom I have turned numerous times especially when I needed some good advice on regression analysis.

My gratitude also goes to PWC, the Economic and Social Research Council, the British Federation of Women Graduates and the Business School for the financial contribution without which this work would not have been possible. There are dozens of other

people who I would like to thank, too many to name individually, but they know who they are. They include my fellow doctoral students, the staff in the accounting department and, in particular, Anthony Steele, my flatmates at Claycroft and the Pop-Mobility team at the Sports Centre, in their own way they have all contributed towards the completion of this work.

Last by no means least I thank my mother for always being there for me, even during her toughest moments; my brother for taking care of our mother; and finally, my partner, Dimos, who had the patience to tolerate me at times that even I could not stand myself.

# Declaration

- This dissertation was written by Annita Florou based on work undertaken at Warwick Business School.

- The work has not been accepted for any previous degree.

# Abstract

The present research analyses the determinants and the implications of senior management departures in the UK. Based on a sample of the 460 largest UK companies by market capitalisation over 1990-1998, and using regression techniques, this study investigates the event of top management turnover in three empirical chapters. The first one documents the circumstances under which poor firm performance may lead to a CEO job separation. The second chapter explores the organisational consequences of CEO turnover by modelling - for the first time in the UK - Chairman turnover at the time of CEO departure. The last empirical chapter deals with the implications of CEO turnover on investment choices.

The most important methodological advancement is the rigorous and comprehensive classification of management departures, which increases significantly the power of the tests considered in the thesis. The provision of additional evidence on the conflicting issue of managerial entrenchment, the modelling of Chairman turnover and the investigation of the role of equity-based compensation in mitigating opportunistic managerial incentives are among the conceptual contributions of the study.

The primary findings of the thesis can be summarised as follows. Firstly in terms of top management departures, CEO turnover is linked with poor firm performance although the latter must fall significantly in order to increase the turnover likelihood. This disciplining effect seems to have not become stronger over time and, CEOs do not appear to become entrenched at high ownership levels. Secondly with regard to Chairman turnover, there is evidence that some Chairmen also depart when the CEO turns-over, especially following poor company performance or CEO dismissals. Outside CEO succession, on the other hand, does not appear to be associated with additional increases in the Chairman turnover likelihood. Finally with respect to investment, it appears that CEOs threatened by forced termination, tend to cut down investment prior to their departure in order to increase reported income and "save" their jobs. In contrast, retiring CEOs do not engage in opportunistic behaviour, even if they own a small fraction of the company's equity.

# CHAPTER 1

# Introduction

## 1.1 Introduction

The primary theme of the current thesis is corporate governance. This topic has received widespread attention in recent years, particularly in the US and the UK, and not just from academics, but from the media, the public and governments alike. The term corporate governance is used to denote "the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment" (Schleifer and Vishny 1997, p.737). The problems of corporate governance in listed companies with diffuse ownership are well known and long established (e.g. Berle and Means 1932; Tricker 1984).

A number of financial scandals in the 1980s reigned a debate on how best to make managers accountable to shareholders that continues today. The publication of the Cadbury Report in 1992 introduced the first of several new corporate governance guidelines. These were followed by the recommendations of the Greenbury and Hampel Committees, which in turn were incorporated into the Combined Code. Finally, the recent publication of a consultative document on directors' remuneration (DTI 1999), the establishment of a major programme to review company law to incorporate corporate governance issues (Company Law Review Steering Group 1999; 2000a, b), and the further recommendations on the directors' behaviour of the Committee on Standards in Public Life suggest that corporate governance remains a leading topic in

the agenda of policy makers and the UK government. Fuelled by this public interest, academic focus in the subject of corporate governance has soared during the last years. Nevertheless, the issue of top management turnover (which is one of the topics discussed in corporate governance) and the events surrounding the changeover has, comparatively, less often been addressed by the UK governance literature.

Whilst corporate governance is the main theme of this thesis, a secondary issue addressed is that of earnings management. Policy makers and regulators have also expressed concerns over the issue of earnings management, i.e. the extent to which managers may engage in discretionary behaviour at the expense of shareholder wealth. A representative definition of the above term from the academic literature is the following:

*"Earnings management occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers"* (Healy and Wahlen 1999, p.368).

Within this context, standard setters have been interested in evidence on: a) the magnitude and frequency of any earnings management, b) specific accounting or investment choices made by managers to alter reported income, c) motives for earnings manipulation, and d) any resource allocation effects in the economy. As a result, earnings management has been the focus of numerous academic studies. A very limited

number of those studies, however, (all of which are based on US data) has attempted to link managerial opportunistic behaviour with the turnover event.

In the light of the above, this thesis is of particular interest to both policy makers and academics. It contributes to both corporate governance and earnings management literatures by providing a fuller and richer understanding of the determinants and the consequences of turnover in the UK top management teams. More specifically, based on a unique data set – as will be fully described in Chapter 3 - the current thesis extends existing research by casting new light on the following three main questions:

a) Does poor performance lead to CEO dismissal and if yes, under what circumstances is this relation particularly strong?

b) What are the determinants of the turnover of the Chairman and in particular, is Chairman turnover associated with CEO departure and outside succession?

c) Do CEOs approaching departure behave opportunistically by reducing the company's investment?

## 1.2 The UK Data

One of the main reasons for the lack of analysis in both areas has been the considerable difficulty of collecting the appropriate data. A rigorous investigation of the above issues requires detailed information on the identities of top managers and the circumstances surrounding these departures. Moreover, data based on either specific industries or specific years can be limited in their attempt to provide powerful tests of the above

issues. The analysis undertaken in this thesis is among the first to utilise a rich source of panel data, representing a key contribution to the UK corporate governance and earnings management literatures.

In summary, the distinguishing features of the current study's data set are threefold. Firstly, drawn on the top 460 UK listed companies by market capitalisation during 1990-1998, it records the identity of each company's Chairman, CEO and group Managing Director (MD) in contrast with previous UK studies that focus only on CEOs, and sometimes on Chairman or MD positions. Bearing in mind that the title "Chief Executive Officer" has only comparatively recently been used to denote the top corporate position in British companies, this is a very important contribution in the mapping of top management departures in the UK, since: a) it allows a more precise identification of the company's Top Executive, and b) it enables the modelling of Chairman turnover, an issue with valuable implications for the UK, yet ignored in its corporate governance literature.

Secondly, the richness of the data – and in particular the availability of panel data – yields a number of novel and useful information regarding the profile of the top UK managers. Finally, due to the quality of the hand-collected data the current thesis is the first study to perform a more detailed analysis of all types of management departures (including the retirements) and hence, execute a more rigorous turnover classification than previous studies (including the US studies). This in turn, is a fundamental prerequisite for the implementation of more powerful tests of a number of issues related with managerial turnover.

## 1.3 The Structure and Aims of the Thesis

Chapter 2 is a literature review. The aim of this chapter is twofold. Firstly, to provide a general theoretical foundation on which the remainder of the thesis is built. And secondly, to critically review the empirical studies that have dealt with the issues addressed in the current thesis. Accordingly, Chapter 2 begins with: a) a critical discussion of the fundamental concepts of the property rights literature and b) an explanation of the underlying rational of corporate governance within the agency paradigm. The next section of Chapter 2 continues with a review of the previous empirical literature paying particular attention at how it relates to the analysis undertaken in the current thesis.

The objectives of Chapter 3 are mainly two: a) to detail the construction and content of the main data set of the 460 largest UK quoted companies by market capitalisation over the period 1990-1998 that supports the thesis, and b) to report trends and developments regarding the profile of UK top management teams. Accordingly, based on this sample the analysis identified a total of 711 top management departures (the identification of which will be fully explained later). Moreover, each empirical chapter is based on a sub-section of the total number of the senior management changes. Specifically, Chapters 4 and 6 are based on the departures of the company's leading executive whilst Chapter 5 refers to the Chairman departures.

As mentioned above, the quantity and the richness of the data collected and used in this thesis represents a significant advance over similar work carried out in the UK. In particular, the quantity of the data increases significantly the power of the tests done in this study whilst the quality of the data ensures that an accurate identification of top

management changes and a comprehensive classification of these departures are possible. Chapter 3 discusses and explains in detail both these processes. Throughout this section a number of useful descriptive statistics regarding the UK senior managers are documented. The chapter concludes by introducing the company variables collected and used in the study. A detailed description of the construction of these variables is, however, included in the chapters in which they are used. This way, the reader will find it easier to follow the analysis.

Chapter 4 considers the effectiveness of internal governance mechanisms, such as the board of directors. More specifically, it addresses a central corporate governance question: are changes in the top position associated with poor company performance? A very important variable used in this chapter is the leading executive of each company for each year (hereafter referred to as the Most Senior Executive, denoted MSE). Note that throughout the thesis the terms CEO and MSE are used interchangeably. The first one is mainly preferred when referring to more general issues whilst the second one is adopted when discussing the results of the current thesis.

This chapter makes two further contributions to the UK empirical literature. Firstly, it explores the relation between the likelihood of a forced Most Senior Executive departure and firm performance where the quality of the data enables the use of a more precise identification of the company's top executive and a much less noisy measure of forced turnover. Secondly, it documents the circumstances under which poor performance can lead to a Most Senior Executive job separation. That is, it investigates three main issues: a) how bad does firm performance need to be before MSEs are replaced? b) are today's MSEs more likely to be disciplined for poor performance

compared with those in the past? and c) do MSEs become entrenched at high ownership levels?

The results presented here provide strong evidence consistent with the argument that declining performance leads to MSE replacements whilst there is not sufficient indication of managerial entrenchment. The performance-turnover relation, however, appears to be unchanged across different time-periods and particularly evident under extreme levels of performance. A further interpretation of these results is that the board of directors, which serves as a major internal governance institution, is effective in disciplining under-performing CEOs but mainly under severe circumstances. That in turn, implies that there may exist certain information asymmetries between the directors and the investors. In other words, directors may have inside information regarding the future prospects of the company; the industry as a whole; or even the availability of potential candidates. As a result, directors may wish to wait before they act, i.e. before they take disciplinary action against under-performing CEOs.

Chapter 5 continues the analysis on executive turnover by investigating the consequences of such an event, and in particular its association with Chairman departures. In fact, this work represents the first empirical study that models Chairman turnover using UK data. The issue of Chairman turnover is not only extremely under-researched but also of particular importance in the UK where it is common practice for companies to have both a Most Senior Executive and a Chairman. Moreover, the Chairman's role is unique and distinctly different from that of the rest directors in that he is the one to: a) "set the tone"; i.e. help the directors establish the business strategy, b) "have an eye for the long term"; i.e. be particularly alert when a strategic re-direction

is needed, and c) "blow the whistle", i.e. initiate the replacement of an under-performing CEO.

More specifically, this chapter considers four important questions: a) does the directors' board penalise Chairmen - and not only MSEs - for poor performance? b) do Chairmen leave office at the same time as MSEs? c) are forced MSE resignations linked with more Chairman departures than natural MSE turnover events? and d) is outside succession associated with further organisational restructurings by increasing the likelihood of Chairman turnover? Though some of these issues have been addressed in the US literature, the analysis in this study is significant and unique also in that it is the first to utilise a rich data set in order to expand the above questions by examining: a) whether Chairmen are likely to be dismissed than voluntarily depart when the Most Senior Executive also turns over, and b) whether the impact of outside succession differs under alternative MSE turnover scenarios.

The analysis presented here shows that Chairmen – likewise MSEs – are dismissed for poor performance, although the relation is less negative. Directors are, therefore, monitors not only of the CEO but also of the Chairman. They, however, are less willing to replace the latter as they recognise that he/she is not the chief leader of the company. Moreover, analysis demonstrates a strong association between MSE turnover and Chairman departures, who, in fact, are ousted from the board. The above link is reported to be stronger following poor performance or when the Most Senior Executive is dismissed. Taken together these findings indicate that the board of directors plays a fundamental role in ensuring that the shareholders' interests are best served - particularly in the event of crisis situations - as they believe that the dismissal of the

Chairman, following the departure of the incumbent CEO, is a fundamental prerequisite for the successful implementation of the new CEO's strategy and business plans. Finally, outside succession does not seem to be associated with additional Chairman changes, under all circumstances.

Chapter 6, the last empirical chapter of the thesis, investigates whether certain types of executive departures are associated with certain types of discretionary behaviour. Specifically, the focus of this chapter is the detection of two classes of potential managerial discretion associated with CEO departures. Firstly, outgoing CEOs approaching a known retirement or departure date cutback on investment expenditure to increase earnings (and earnings-based compensation) in their final year at the expense of future earnings (the "horizon" hypothesis). Secondly, outgoing CEOs in poorly performing companies threatened by job termination reduce investment in an attempt to cover-up the firm's deteriorating economic health (the "cover-up" hypothesis). An implicit assumption in both cases is that CEOs are able to "fool" the board of directors. However, successful monitoring of CEOs' strategic plans is not always an easy task, since the latter have often an important information advantage over directors.

Similar to Chapter 5, this work is also the first empirical test of the above hypotheses based on UK data. In particular, the analysis of the chapter is novel in that it extends existing knowledge on earnings management within the context of CEO changes in three main ways. Firstly, the comprehensive and detailed classification of executive departures ensures a more powerful test of the horizon and the cover-up hypotheses than before. Secondly, it provides additional evidence on whether the opportunistic incentives of retiring MSEs may vary at different levels of stock ownership, an issue

particularly under-investigated. Finally, it considers the level of investment expenditure during the MSEs' final years where an underlying theory on optimal investment level based on an Euler equation is adopted.

The econometric results reported here are broadly consistent with the cover-up hypothesis but fail to confirm the horizon predictions, which are not established even at low levels of MSE stockholdings. That is, contrary to retiring CEOs, managers threatened by a forced departure are inclined to increase earnings through the firm's investment policies. Similar to Chapters 4 and 5, the above results can again shed some light on the role of the directors' board, whose tasks are not restricted to the monitoring of managerial performance but also include the approval of plans critical to the long-term success of the company (e.g. investment projects) and the supervision of its financial reporting systems. Accordingly, compared with planned top executive departures, the environment surrounding CEO dismissals may make it more difficult for directors to successfully evaluate CEOs' proposals and therefore, minimise the opportunities for earnings management.

Finally, Chapter 7 draws the thesis together by reviewing the main findings of the preceding chapters. The chapter concludes by offering a brief discussion of further implications for the internal governance processes of UK companies. A full list of the 460 companies constituting the data set can be found in Appendix 1, while Appendix 2 details the variables collected for each of the companies included. Finally, a list of all the abbreviations used in the thesis is provided at the end. The next chapter then introduces the main topics covered by the thesis, beginning with a review of the theoretical framework.

# CHAPTER 2

# Literature Review

## 2.1 Introduction

The aim of this chapter is twofold. Firstly, to provide a general conceptual framework for the work undertaken later in the thesis. This itself implies the understanding of the major underlying concepts of: a) the property rights theory, and b) the agency paradigm. Secondly to provide a review of the empirical literature related to the issues investigated in the current study. The motivation for each of the topics addressed in the thesis is dealt with in more depth in the appropriate chapters (i.e. Chapters 4, 5 and 6).

The rest of this chapter is organised as follows. Section 2.2 consists of two parts. The first one explains the basic concepts of the property rights theory, which suggests new directions in the theory of the firm and in particular, a broad framework on the topic of managerial opportunistic behaviour. The second one considers the principal agent model and provides an underlying rational of corporate governance within the agency paradigm. These substantive parts form the broader background to the thesis as a whole since they deal with its two central issues, namely, corporate governance mechanisms (Chapters 4 and 5) and earnings management (Chapter 6).

Sections 2.3, 2.4 and 2.5 consider more extensively the empirical literature of the thesis. More specifically, Section 2.3 provides a critical discussion of the most important papers investigating potentially significant predictors of the managerial turnover

possibility. The section deals with mainly two such predictors: a) pre-dated firm performance, and b) managerial stock ownership. A separate sub-section is devoted to related empirical studies based on UK data, paying particular attention to their shortcomings.

In contrast with Section 2.3 that deals with the *determinants* of executive turnover, Section 2.4 deals with the *consequences* of executive turnover. Accordingly, this part addresses the topic of major organisational transformations, including changes in the composition of the top management team, following the combined event of turnover and succession of the company's leading executive. The issue of managerial succession is further discussed by reviewing a number of studies that address the circumstances under which the likelihood of an outside top management appointment is more likely. Such evidence, although does not directly address the implications of outside succession, may yield valuable suggestions.

Following Section 2.4 that considers the *operational, strategic, and structural* consequences of management turnover, Section 2.5 considers the implications of the turnover event for the company's *investment* decisions. It starts with an overview of the economic models of investment and an introduction of the particular empirical specification adopted in the thesis. A critical review of past papers examining investment choices associated with management departures is then presented.

Under all three sections of empirical evidence, the literature review will indicate the lack of UK research and/or US research on the topic under investigation as well as the methodological limitations of existing research. Moreover, compared with the research

on the determinants of executive turnover, the literatures reviewed in Sections 2.4 and 2.5 are smaller, which is another indication of the absence of substantive prior empirical work. Finally, it should be noted that the empirical chapters of the current study adopt the same sequence as the literature reviews in order to enable the reader to compare previous findings with those of the current study. Accordingly, Sections 2.3, 2.4 and 2.5 present the empirical background of Chapters 4, 5 and 6 respectively.

## 2.2 Theoretical Background

Before commenting on prior empirical evidence relating to this thesis, the following sections outline its theoretical origins. Accordingly, they provide a comprehensive discussion of the main ideas of: a) property rights theory and b) agency theory.

### *2.2.1 Property Rights Theory*

An independent stream of research with important implications for the theory of the firm has been the property rights literature (Jensen and Meckling 1976). A thorough review of this literature is beyond the scope of the current thesis. Instead, this part concentrates on those elements of the property rights paradigm that are most relevant to the current study. Accordingly, it focuses on the notion of managerial discretionary behaviour, which is the topic under discussion in Chapter 6.

A fundamental presumption of this literature is that transaction costs are recognised as being greater than zero (Furuboth and Pejovich 1972). In particular, the property rights theory was stimulated by the pioneering work of Coase (1937, 1960). In an attempt to discover why a firm emerges in a specialised exchange economy, Coase (1937,1960) argues that the existence of market transaction costs necessitates the existence of firms.

He claims that the *higher the cost of transacting across markets* the greater will be the comparative advantage of organising resources within the firm. Alchian and Demsetz (1972) build up on the previous argument by stating that *the lower the cost of managing* the greater will be the comparative advantage of organising resources within the firm.

They then analyse the circumstances under which the cost of managing resources is low relative to the cost of allocating resources through market transactions. In the case of a modern corporation, particular, where there are several input owners, they conjecture that effective control of corporate activity is achieved by transferring decision authority to a smaller group or individual, whose main function is to monitor and manage the inputs of the firm's employees. This is mainly because, if each stock owner participated in each decision of the corporation: a) large bureaucratic costs would be incurred, and b) many of the stock owners would shirk the task of properly informing themselves, since the losses associated with bad decisions will be borne by the many other shareholders (Alchian and Demsetz 1972).

But who will monitor the monitor? Obviously, if shirking is to be checked the central monitor must have sufficient incentive not to shirk himself. Consequently, Alchian and Demsetz (1972, p.783) deduce that the monitor must possess specific "property rights" including: a) the right to receive the residual after all other inputs have been paid contractual amounts, b) the right to supervise the performance of team members, c) the right to terminate or revise the membership of the team (i.e. the possessor of these rights is a central party to a set of bilateral contracts), and d) the right to sell these rights. This set of property rights defines the *ownership* of the classical firm.

The property rights approach offers a fresh and useful way of looking at various economic problems. Indeed, the main contribution of this literature is that it enables the expansion of traditional economic theories (e.g. the theory of production and exchange) that attempt to explain not only the emergence of the firm but also how the conflicting objectives of the individual participants are brought into equilibrium so as to maximise the value of the firm; the so-called "black-box" problem. One such valuable application can be found in the traditional classical theory of the firm. In this case, the property rights paradigm moves towards theories that reject the classical model of the firm but assume classical forms of economic behaviour on the part of agents within the firm. Furubotn and Pejovich (1972) summarise the essential features of these new directions in the theory of the firm as follows:

a) Under the property rights theory, the firm *per se* is no longer the unit of analysis; instead the firm is viewed as a system of relationships or a *nexus of contracts* among factors of production (i.e. team members). Moreover, team members (e.g. workers, managers etc.) are assumed to seek their own interests and to maximise utility subject to the limits established by the existing organisational structure. Consequently, property rights scholars replace the *profit maximisation* objective developed in the classical theory of the firm by the *utility maximisation goal* (Furubotn and Pejovich 1972, pp.1137-1138).

b) The replacement of the profit maximisation goal by the utility maximisation goal, on one hand, and the development of the property rights structure by Alchian and Demsetz (1972), on the other hand, lead us to a fundamental proposition: the

*behaviour of managers* becomes the key for understanding the allocation and use of resources by corporations (Furubotn and Pejovich 1972, p.1147).

c) The property rights view has created a new set of relationships, according to which, the manager (i.e. the monitor) acquires powers that are absolute and not limited by any implied obligation with respect to their use. This logic leads to the drastic conclusion that the men in control (i.e. managers) *can engage in discretionary (i.e. opportunistic) behaviour and divert a portion of the company's resources to their own ends* (Furubotn and Pejovich 1972, p.1147).

Despite the valuable contribution of the property rights theory, it has not managed to explain certain settings of the large modern corporation. In particular, in the classical theory the agent who personifies the firm is the entrepreneur who is assumed to be both *manager* and *risk bearer*. In the property rights literature the entrepreneur continues to play a central role *(i.e. he is both the monitor and the owner)*. Consequently, this literature does not fully explain the separation of ownership from control, present in large modern corporations, and more importantly the problems that arise from this phenomenon.

Agency theory casts new light on the implications of the above organisational setting (e.g. the conflict of interests and the room for opportunistic behaviour). The following section summarises the main elements of agency theory and details the conditions under which corporate governance issues are important.

### *2.2.2 Corporate Governance and Agency Theory*

Agency theory has been one of the most important theoretical paradigms in economics during the last twenty years. It has developed independently of the property rights literature even though the problems with which it is concerned are similar; the approaches are in fact highly complementary to each other.

The standard definition of corporate governance among economists and legal scholars refers to the defence of shareholders' interests (Tirole 2001). The issue of corporate governance arises when one departs from the *owner-managed* firm and introduces the concept of a separation between *ownership* and *control.* Financial economists have long been concerned with the incentive problems that arise when decision making in a firm is the province of managers who are not the firm's security holders. The modern literature on the problem of the separation of ownership and control dates back at least to Berle and Means (1932). They predict that the increasing professionalisation of managers would lead to firms being run for their benefit rather than that of the owners. In 1976, Jensen and Meckling formalised this problem by proposing a "principal-agent" framework to model the conflict of interest between the principal (in this case the owner) and the agent (in this case the manager).

Typically, in the agency literature, there is a risk-neutral principal who supplies capital and an agent - averse to risk and labour - who supplies labour (Jensen and Meckling 1976). The conflicting interests between the agent and the principal arise mainly from three sources. These are: a) choice of effort: additional effort by the agent generally increases the value of the organisation, but to the agent effort is "bad" (Ross 1973); b) differential time horizons: the agent's claim on the organisation is generally limited to

his tenure with the organisation whereas the latter has indefinite life and the principal's claims are tradable claims on the entire future stream of cash flows (Jensen and Meckling 1976); and c) differential risk exposure: the agent typically has a nontrivial fraction of his wealth in firm-specific human capital and thus is concerned about the variability of the total firm value (Reagan and Stulz 1983).

The above conflicting interests in turn generate the classic agency problem (Jensen and Meckling 1976; Tirole 1988; Hart 1995) characterised by imperfect and asymmetric information. In particular, an informational advantage lies with the agent, such that contractual arrangements (including compensation incentives) based on the agent's level of effort are not possible. Consequently, an outcome-based contract (e.g. based on profit) is alternatively used. In this case, contracts although based on observable profits rather than effort, are complete in the sense that they specify the parties' obligations in possible future states of the world contingent on these obligations being observable and verifiable. This means that there will never be any need to revise or renegotiate the initial contract, because any addition or change to it could have been anticipated and specified in the initial contract (Molin 1996). As Hart (1995, p.679) remarks "in a comprehensive contracting world, everything has been specified in advance, i.e. there are no 'residual' decisions". Governance structure in such a world is deemed irrelevant.

A fundamental presumption of the above is that contracting is perfect and costless. Transaction costs in writing contracts, however, may be considerable and numerous. According to the transaction costs literature there are three main types of such costs: a) the cost of specifying all eventualities and their resolution during the lifetime of the contract, b) the costs of negotiating with all the contract parties about the plans, and c)

the costs of formally writing down the contract such that they can be enforced by a third party in the event of a dispute arising (Williamson 1975). Under the above circumstances the parties will no longer be able to compose a comprehensive contract.

The reason why this incompleteness matters is that it imposes costs. Renegotiations may be costly, time-consuming and wasteful with resources, while serving no overall productive purpose. Moreover, incomplete contracts may lead to costly legal disputes or even present an obstacle to reaching efficient agreements. Consequently, as Hart (1995) emphasises, corporate governance does matter under the following two circumstances: a) an agency problem between members of the organisation (e.g. shareholders and managers) must exist *and* b) transaction costs must be prohibitive, such that the agency problem cannot be resolved with a well-defined contract. The principal-agent considerations alone may be necessary but are not sufficient to provide a role for governance structure (Hart 1995, p.679).

So, incomplete contracts, in conjunction with the agency problem of interest-misalignment and incomplete/asymmetric information, provide a role for governance structures that can be seen as a mechanism for making decisions that have not been specified in the initial contract. More specifically, governance structures allocate - in the words of Grossman and Hart (1986) and Hart and Moore (1990) - "the residual rights of control" over the company's assets, i.e. the right to control all aspects of the assets that have not been explicitly given away by contract. This property rights approach

advocated by Grossman, Hart, and Moore singles out a specific governance structure, namely, *ownership*. That is, the purchase of the residual control rights[1].

Nevertheless, as Tirole (2001) points out allocation of the control rights (i.e. the purchase of the right to affect the course of action once the firm has got started) cannot be the full story. In his most recent paper on corporate governance, Tirole (2001) makes the valuable distinction between "formal control" and "real control". According to his remarks, although shareholders have formal control over a number of decisions (through their votes), managers often have real control. That is, managers have *"private information"* that often enables them to serve their own goals, such as carry out unprofitable but power-enhancing investments[2]. In view of the managers' ability to pursue their own agenda, it is obviously important that there exist checks and balances on managerial behaviour. Given that monitoring is costly, dispersed shareholders, however, have little or no incentive to monitor management; instead they free ride on the hope that other shareholders will do the monitoring. And since all of them behave the same way the end result is that no monitoring takes place (Hart 1995). This creates the need for corporate governance.

Much of the subject of corporate governance deals with the constraints that investors put on managers in order to curb their *opportunistic incentives* or, in other words, their *self-serving behaviour*. Thus corporate governance institutions, such as the board of directors, can play a key role in monitoring top executives (Fama and Jensen 1983), and

[1] The focus of the current thesis is the importance of control rights in corporate governance. An extension of this literature addresses the importance of control rights in corporate finance. For more details see Aghion-Bolton (1992), Hart and Moore (1998).

[2] This is not to say, however, that managers' real control is unlimited or that they have formal control (i.e. that they end up making the decisions). In practice, management needs to refer to shareholders for permission concerning many of their decisions.

indeed in curbing it, by seeking to replace part or all of the management who fail to perform at the best interest of shareholders (Weisbach 1988). It is this relationship that becomes the central focus of Chapter 4 and also has relevance to the work presented in Chapter 5.

The rest of the current chapter deals with prior empirical work, starting with that of Chapter 4.

## 2.3 Turnover, Performance and Stock Ownership (Chapter 4)

This section discusses previous work investigating the determinants of top management turnover likelihood, when turnover is the result of internal governance, such as the board of directors or large shareholders[3].

### *2.3.1 Managerial Turnover and Firm Performance*

The literature on the performance-turnover association dates back at least in 1961 with Grusky who finds that the turnover of baseball managers increases with declining team performance[4]. The modern literature on the issue, however, starts with Coughlan and Schmidt in 1985.

[3] Examples of studies on the effectiveness of external control mechanisms are Walsh (1988), Martin and McConnell (1991), Pound (1992), Jensen (1993), Agrawal and Walkling (1994), Franks and Mayer (1995), Dahya and Powell (1998), while Jensen and Ruback (1983) provide a comprehensive review of past research on the effectiveness of corporate take-overs. Finally, a stream of papers investigates the relation between managerial turnover and financial distress (Warner 1977; Gilson 1989; Gilson and Vetsuypens 1993).

[4] Further earlier studies focusing on sports organisations are Gamson and Scotch (1964), Eitzen and Yetman (1972), Allen et al. (1979), Brown (1982). Early studies focusing on companies are Pfeffer and Leblebici (1973), McEachern (1977), Pfeffer and Salancik (1977), Crain et al. (1977), Salancik et al. (1978), James and Soref (1981), Osborn et al. (1981), Wagner et al. (1984).

Coughlan and Schmidt (1985) explore the relation between the probability of a CEO change and the firm's abnormal stock price performance based on a sample of 249 corporations from Forbes over the period 1978-1980. The sample generates 76 CEO changes. The empirical confirmation of such a relation is, however, complicated because there exist many other possible reasons for a change in top management: normal retirement, illness or death etc. In order to avoid the effects of such complications, Coughlan and Schmidt divide their test sample into two components; the first one consists of CEOs who are at least 64 years old whilst the second one includes individuals in younger cohorts. Using the logit regression, they find that stock price is *not* inversely related to the probability of turnover for the first sub-sample while stock performance *is* inversely related to the probability of turnover for the second sub-sample. Coughlan and Schmidt, thus, demonstrate that stock price performance largely explains CEO turnover in the case of younger executives while age is the dominant factor for top management changes in the case of older executives.

Following Coughlan and Schmidt (1985), Warner, Watts and Wruck (1988) conduct a stronger test of the association between stock price performance and top management changes. Their sample consists of 269 firms listed on the New York and American Stock Exchanges (NYSE and AMEX respectively) in the period 1963-1978. Their work differs from that of Coughlan and Schmidt in four main ways:

a) Their unit of analysis is not only the CEOs but also Presidents and Chairmen. A top management change is therefore, identified as any change in the set of individuals holding the titles of CEO, President, or Chairman of the board.

b) In order to avoid the empirical complications/biases mentioned by Coughlan and Schmidt, they identify several types of top management changes using information on the details of observed management changes. Searching the Wall Street Journal (WSJ) articles, Warner et al. are able to identify forced departures (e.g. top managers leaving the firm because of poor performance, policy or personality differences, etc.).

c) Besides the firm's stock return, they also use market/industry returns and their lags as additional independent variables. The basic idea is that for a given level of firm stock return, better market or industry performance indicates poorer relative performance and is associated with a higher probability of a top management change. This suggests that management is not held accountable for some factors outside its control.

Overall, results indicate a robust inverse relation between the probability of a forced top management change and stock performance. As they demonstrate, however, only extreme levels of performance affect significantly the turnover possibility; ranking firms by performance and placing them in deciles, the probability of forced turnover decreases from 3.1% in the bottom 10% of firms to 0.7% in the top 10% of the firms. Finally, although logit regressions demonstrate a positive relation between market returns and the probability of a top management change, industry return variables are typically insignificant. This suggests that either industry performance is not associated with measures used to evaluate managers, or two-digit SIC-code-based measures are very noisy. Following Warner et al. (1988) most of the studies perform a detailed analysis of executive departures based on press articles.

Weisbach (1988) introduces *changes in accounting earnings* as an additional measure of firm performance. Drawn on a sample of 367 companies listed on the NYSE during 1974-1983 (including 286 CEO changes) Weisbach finds that: a) poor stock return increases the probability of a CEO losing his job; this result replicates the result of Coughlan and Schmidt (1985) and Warner et al. (1988) with an effect smaller than the former and larger than the latter, b) both performance measures used are more highly correlated with CEO turnover for firms in which outsiders dominate the directors' board than for firms in which insiders dominate, and c) the results do not appear to be caused by differences in the ownership structure of the firm, the size of the firm, or the industry in which the firm participates.

Morck, Shleifer and Vishny (1989) distinguish their analysis of the turnover-performance relation in three main ways:

a) Their unit of analysis is not the turnover of any of the officers holding top titles but instead the complete turnover, i.e. the departure of *all* officers *signing* the letter to shareholders in the annual report.

b) Besides abnormal stock returns they use two additional variables, the Tobin's Q and employment growth rates.

c) They differentiate between industry effects and firm-specific effects, by looking separately at industry-wide and firm-specific performance, in order to explore the extent to which boards respond differently to these two types of problems.

Their sample consists of 371 Fortune 500 firms during 1981-1985. Based on a total of 93 cases of complete turnover Morck et al. (1989) report that poor performance - measured by both Tobin's Q and abnormal returns - raises the probability of a complete turnover. In addition, they demonstrate that directors' boards are more successful in addressing firm specific than industry-wide problems. That is, directors are more readily to replace top management when the firm under-performs its industry but not when the industry itself suffers of bad performance.

In 1990 Barro and Barro test the CEO turnover-performance relationship drawn on a sample of 83 large commercial US banks over the period 1982-1987; the sample includes 51 CEO departures. The distinguishing feature in this analysis is the use of stock returns and accounting earnings yield *relative to the geographical region and year average.* The estimated coefficients on these performance variables are negative and significant indicating that better firm relative performance reduces the probability of CEO turnover. Barro and Barro (1990) conclude that CEO turnover is negatively and significantly associated with stock returns but not with accounting earnings. This finding contrasts that of Parrino (1997) and Weisbach (1988) who report increased CEO turnover following poor accounting-based performance. Nevertheless, the main limitation of this study is the absence of a comprehensive classification of CEO departures.

Jensen and Murphy (1990) contribute to the above literature by investigating not only the dismissal threat but also *the subsequent loss of earnings.* As they maintain, the threat of management dismissal for poor performance provides value-increasing incentives to the extent that managers earn more than their opportunity cost. They

explore the above argument by testing both the performance-turnover and the pay-performance sensitivity for CEO dismissals. Their sample consists of 2,213 CEOs over a thirteen-year period (i.e. 1974-1986). Consistent with previous studies, they conclude that the probability of a CEO departure is negatively related to current and past firm performance, as measured by stock returns in excess of the value-weighted return of all NYSE firms. More importantly, however, they demonstrate that expected wealth losses in the case of a CEO dismissal are relatively large; for example, a 62-year old CEO in a firm realising 0% net-of-market return will lose $368,000 compared to a $714,000 if his firm earns -50% below the market in each of the two previous years. Nevertheless, this loss is small compared to the CEO's losses on his own stockholdings and more importantly it is trivial compared to shareholder losses; for example, the CEO's expected dismissal-related losses of $368,000 imply that CEOs lose 28.4c. for each $1,000 lost by shareholders.

In contrast to all previous studies, Puffer and Weintrop (1991) report that CEO turnover is not significantly related to firm performance. The unique feature of this paper is the use of *performance expectations* as an additional performance measure along with cumulative abnormal returns (CAR) and accounting ratios (AR). They argue that the board of directors develops expectations of corporate performance, which it then uses to judge the CEO's performance. Consequently, Puffer and Weintrop hypothesise that performance expectations are a better predictor of CEO turnover than measures derived from mechanical algorithms (e.g. CAR). Financial analysts' forecasts are used to operationalise the board's expectations. According to their main findings, unexpected earnings per share (EPS) - measured as the difference between actual EPS and the mean of financial analysts' expectations of EPS - are significantly negatively related to CEO

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turnover. CAR and AR, on the other hand, do not seem to explain CEO turnover. Despite the meaningful insights of this paper, its main limitation is the size of its sample; logit regressions are run on a total number of 408 large companies in 1982, resulting in only 22 turnovers.

Parrino's (1997) investigation of the performance-turnover relation differs from previous studies in two main ways: a) he examines the association between CEO turnover and firm performance depending on the succession outcome (to be discussed in Section 2.5.1), and b) he introduces a new factor affecting managerial turnover that of the *level of homogeneity* among various industries. The correlation between common stock returns across all firms in each two-digit SIC industry is used as a proxy for the level of homogeneity among industries. Based on a sample of 977 CEO changes over the period 1969-1989, he reports that the likelihood of both forced departures and outside successions is higher in industries that consist of similar firms than in heterogeneous industries. The evidence is consistent with predictions that under-performing CEOs are easier to replace in homogeneous industries. The cost of hiring an executive from another firm in the same industry tends to be lower in homogeneous industries because executives at other firms in these industries have more of the human capital that is important to the CEO position.

While all previous studies use modern panels, Hadlock and Lumer (1997) investigate the relation between stock performance and management turnover based on a sample of 231 industrial firms *over the period 1933-1941*. Their sample generates 244 top management changes. In addition, Hadlock and Lumer provide a more comprehensive analysis of top executive turnover by including additional explanatory variables, such as

the founding status and tenure of top managers, the composition of the directors' board, the ownership structure of the firm, etc.

Their most important findings could be summarised as follows:

a) The annual rate of non-death changes in both the top management team and CEO position is substantially smaller than estimates reported for modern panels (see, Warner, Watts and Wruck, 1988).

b) In contrast to almost all other studies of management turnover that find negative and significant coefficients on stock performance variables, Hadlock and Lumer report no relationship between stock performance and management turnover during the period 1933-1941. Management turnover, therefore, has become more sensitive to firm performance since the 1930s.

c) Managerial turnover is still very little sensitive to stock performance for alternative dependent variables, such as CEO change, outside change, and forced departures.

d) None of the above mentioned control variables appear to be a significant explanator of the turnover-performance sensitivities reported in this study.

A more comprehensive study of CEO turnover based on modern data is provided by Huson, Parrino and Starks (2001). The distinguishing feature of this study – most relevant to the current thesis – is the investigation of the performance-turnover relation *over time*. That is, they examine if and how CEO turnover decisions have changed over

the period 1971-1994. In particular, they divide their twenty four-year sample period into four six-year sub-periods: 1971-1976, 1977-1982, 1983-1988, and 1989-1994. Based on a total of 987 CEO turnover events – of which 121 are forced – they conclude that the probability of forced turnover is negatively related with poor performance regardless of the time period, when performance is measured by stock returns. Moreover, the estimated relation is stronger in the 1977-1982 sub-period than in either the 1983-1988 or the 1989-1994 sub-period, when performance is measured by accounting returns. Together, the results for forced turnovers suggest that internal governance structures are equally effective across the various sub-periods. Similar results are reported by Murphy (1999) who, in addition, provides an excellent review of executive turnover papers based on US data.

The issue of executive turnover continues to attract the interest of academics that expand the literature either by introducing to the relation potentially important predictors or by focusing on certain CEO and corporate governance characteristics. For example, a number of studies examine the impact of firm diversification on the CEO turnover (e.g. Anderson, Bates, Bizjak and Lemmon 1998; Berry, Bizjal, Lemmon and Naveen 2000); the impact of firm competition (DeFond and Park 1999); the impact of the CEO dual role (Goyal and Park 2000); the impact of CEO tenure (Farrell and Allgood 2000), etc.

Whilst the vast majority of studies on executive turnover are based on US-data, the issue has recently received continuously increasing interest from academics in other countries as well, although evidence remains limited. The inverse relationship between performance and turnover has also been documented in other non-European and

European countries, including Spain (Gispert 1998), Denmark (Lausten 1998), Belgium (Renneboog 1996), Italy (Brunello, Graziano and Parigi 2000), Germany (Kaplan 1994b, 1997), Japan (Anderson, Narayanan and Mandelker 1992; Kaplan 1994a, 1997; Kang and Shivdasani 1995), Canada (Zhou 2000), Australia (Suchard, Singh, and Barr 2001), and other emerging markets (Gibson 1999).

The bottom line of all the above studies is that countries with very different corporate governance systems generate very similar outcomes; executive turnover is significantly and negatively related to firm performance, both stock-based and accounting-based.

Besides prior firm performance, agency scholars have also shown a growing interest in the effect of managerial stock-based compensation on the removal possibility. It is sometimes argued that it may be more difficult to replace inefficient CEOs if they own a substantial stake of the company (Morck, Shleifer and Vishny 1988); the well-known "entrenchment" hypothesis. It is this hypothesis that becomes the main subject of the following sub-section.

### *2.3.2 Managerial Turnover and Stock Ownership*

Early studies of the entrenchment hypothesis adopt the notion of managerial tenure (i.e. the length of time a person serves in a leadership position) than that of managerial turnover (i.e. the frequency of changes of leaderships during a given time period). The former is inversely related to the latter.

McEachern (1977) conducts a first analysis of the effect of executive ownership on managerial tenure as part of his study of the relationship between managerial control

and performance among 96 randomly selected U.S. firms from Forbes 500 in 1972. He classifies the firms as: a) owner-managed, if the CEO owns - directly or through immediate family- 4% or more of the stock, b) management-controlled, when no single group or individual owns 4% or more of the stock, and c) externally-controlled, if a group or an individual holds 4% or more of the stock and is not part of the firm's management. Using variance analysis, McEachern finds that CEOs of owner managed firms have long tenures.

In an extension of this study, which relies largely on the same sample of companies and the same executive control classifications, Pfeffer and Salancik (1980) employ regression analysis to examine the interactions between the different levels of executive stock ownership and two main measures of corporate performance, profit margins and stock returns, with respect to the length of managerial tenure. The data indicate that poorer performance least affects tenure in the case of owner-managed firms and most affects it in the case of externally controlled firms. In the case of owner-managed firms, in which power is most institutionalised, there is actually some evidence for a negative relationship between performance and executive tenure. Evidence, therefore, suggests that executive ownership mediate the relationship between executive tenure and corporate performance.

Although both the McEachern and the Pfeffer and Salancik studies break new ground, they share three limitations: a) the sample of companies examined in each analysis is relatively small; 96 firms in the McEachern study and 84 firms in the Pfeffer and Salancik study, b) the exact sampling procedures employed by McEachern to obtain 32 industrial firms for each of his corporate control classifications is ambiguous, and c) as

a result of the sampling procedures they ignore those firms in which both the CEO and other directors are principal stockholders[5].

Among the first studies that employ managerial turnover instead of managerial tenure, as a measure of managerial departures, is that by Weisbach (1988). His analysis, as already discussed in Section 2.3.1, is drawn on a sample of 367 NYSE firms over the period 1974-1983. According to his findings, increased CEO shareholdings reduce the probability that he resigns, although the reduction is not very significant. Nonetheless, the inclusion of the shareholding variable in the equation does not affect the other coefficients. That is, the sensitivity of turnover to performance is not affected by CEO stock ownership.

Following Weisbach (1988) a number of scholars provide additional evidence for the entrenchment hypothesis. Ofek (1993) documents a negative relation between management turnover and the equity ownership of officers and directors in a sample of financially distressed firms. Denis and Denis (1994) find that majority-owned firms experience significantly lower rates of top management turnover than does a control sample of diffusely held firms, despite similar performance in the two groups. Mikkelson and Partch (1997) document a negative relation between top executive turnover and the equity ownership of officers and directors. Finally, Parrino (1997) alleges that large blocks of stock controlled by CEOs enable them to retain their positions for a longer period, where a founding family dummy variable and the natural log of sales are used as proxies for CEO stock ownership.

[5] For other early studies that use managerial tenure instead of managerial turnover to examine the entrenchment hypothesis see Allen (1981) and James and Soref (1981).

Despite the contribution of the above studies, they are two main limitations. Firstly, none of the studies investigates the impact of executive ownership on the sensitivity of turnover to performance (i.e. the turnover-performance relation at different levels of equity ownership is not the central hypothesis of the analysis). Secondly, from an empirical point of view, none of the studies isolates the impact of CEO shareholdings on the dismissal possibility (i.e. equity ownership is measured as the sum of shareholdings of *all officers and directors* instead of *only* that of the *leading executive*).

In 1997 Denis, Denis and Sarin attempt to fill in the above gaps by providing a more rigorous and direct test of the entrenchment hypothesis. Their sample consists of 1,394 firms included in the Value Line Investment Survey over the period 1985-1988, resulting in 338 non-routine top executive changes. According to their findings, turnover is negatively related to performance when *top executive ownership* is less than 1%, but the relation between turnover and performance is statistically insignificant when top executive ownership is between 1% and 5% or greater than 5%. In contrast to Weisbach (1988), therefore, Denis et al. demonstrate that the probability of turnover is significantly less sensitive to performance for firms with higher managerial ownership. One possible reason for this contradiction could be the adoption of different samples.

Two other studies, already discussed in Section 2.3.1, investigate whether top managers may become entrenched at high ownership levels. In the first one, Hadlock and Lumer (1997), apply the above ownership categories of Denis et al. (1997) on a sample of panel data over the early period 1933-1941. In contrast with Denis et al., their analysis provides little evidence that equity ownership affects the turnover-performance sensitivity. Finally, Huson et al. (2001) report that the likelihood of forced turnover

decreases with the fraction of CEO ownership; the coefficient estimate on the ownership variable is negative (-21.1) and significant at the 5% level. They do not, however, examine the sensitivity of turnover to performance across different ranges of stock ownership.

To recap, evidence from empirical work regarding the entrenchment hypothesis is particularly sparse and more importantly mixed. Moreover, the vast majority of the studies discussed in both Sections 2.3.1 and 2.3.2 are based on US data. As already mentioned, the issue of executive turnover has recently received considerable interest from academics in the UK as well. The following section reviews the most important management turnover papers based on UK data, paying particular attention at their contributions and their limitations.

### *2.3.3 Managerial Turnover in the UK*

In contrast with the US and similarly to most of the rest countries, empirical evidence on the issue of top management turnover in the UK is relatively limited. Among the first papers that explore the performance-turnover relation is that by Franks, Mayer and Renneboog (1996). Their sample consists of 151 companies randomly drawn from the lowest and middle quintile of all industrial and commercial firms listed on the London Stock Exchange over the period 1985-1989. The lowest abnormal return sample consists of 74 companies while the zero return sample consists of 77 companies. Turnover data excludes deaths, illness and retirements. Their analysis yields two main findings. Firstly, there is a statistically significant negative relation between board turnover and performance. Moreover, the relation remains significant over the entire period 1985-1989 in poorly performing firms but not in average performers. Secondly, the frequency

of board turnover is lower in both average and poor performing companies when directors have large shareholdings whereas the likelihood of board turnover is less sensitive to performance in the presence of high directors' equity ownership.

Although the above paper is a pioneering work in the executive turnover literature in the UK, its focus, however, is the modelling of total *board* turnover rather than *top executive* turnover (i.e. CEO, Chairman etc.). Cosh and Hughes (1997) are the first ones to examine the correlation between CEO departure and performance based on UK data. Besides abnormal stock returns and their lags, they use accounting-based returns/lagged returns and relative share and accounting returns as additional performance measures. Their sample includes 64 companies in the UK electrical engineering industry over the period 1989-1994. Consistent with US studies, they find that the probability of forced CEO departure increases following poor performance. Finally, they perform a modest test of the impact of stock ownership on the probability of CEO turnover by classifying their sample into two main categories by control type: a) the owner-controlled firms, and b) the management-controlled firms. According to their analysis, equity ownership does not affect the probability of CEO dismissal.

Despite the innovative and valuable evidence provided by Franks et al. (1996) and Cosh and Hughes (1997), both studies bear two main limitations: a) the sample is drawn on either few years or specific industries reducing thus its size and hence, the power of the test, and b) in contrast with US studies (Weisbach 1988 and Denis et. al. 1997), the stock ownership variable consists of both top managers' shareholdings and the directors' shareholdings; hence, neither study manages to isolate the impact of *top executive* stockholdings on the performance-turnover sensitivity.

Conyon (1998) explores the turnover-performance hypothesis based on a larger sample; 184 large UK companies between 1986-1994. His main results are pretty close to those previously mentioned. Using both logit and probit analysis, Conyon records that CEO turnover is negatively related to shareholder returns and their lags. Consistent with Warner et al. (1988), he demonstrates that there is no effect of competitors' performance on CEO turnover (i.e. the coefficients on average industry shareholder returns are insignificant). However, there are two main limitations in this study. Firstly, the data set contains information only on when the previous CEO separated from his post; the actual turnover rate would be higher for companies with more than one CEO since 1986. Secondly, there is a high possibility of misclassification of CEO departures since the data was collected through a postal survey and CEO dismissals may be disguised as resignations; for example, Weisbach (1988, p. 438) notes that "companies do not announce the true reason behind their CEOs' resignation".

Around the same time, Dahya, Lonie and Powell (1998), expand the above research by examining the importance of ownership structure in determining the turnover-performance relation. From an initial sample of 2,643 London Stock Exchange firms, they examine top management changes (i.e. CEO and/or Chairman) in 105 firms over a 48-month period from 1 January, 1989 to 31 December, 1992. This turnover sample is then combined with a control sample of 166 firms that did not experience a change in their senior management team during the sample period. The final sample consists therefore, of 271 firms over the period 1987-1994, resulting in 2,128 firm-year observations. The results presented by Dahya et al. are consistent with both the poor-performance and the entrenchment hypotheses. That is, prior poor firm performance leads to managerial departures while ownership by top management can make their

timely removal less likely. A surprising conclusion, however, is that the entrenchment effect documented can occur at extremely low ownership levels (i.e. less than 1%).

However, some immediate observations with their approach are noteworthy. Firstly, sample selection bias: pooling observations for the turnover and non-turnover firms over an eight-year period (i.e. 2,128 firm-years) tends to disguise the fact that the study only examines 105 actual turnover events. Although the turnover rates based on this sample remain valid and informative, the sparse nature of the data suggests a degree of caution may be necessary when comparing rates for the different ownership partitions. Moreover, since all turnover cases are sampled during the period 1989-1992, none of the observations from 1987, 1988, 1993 or 1994 add any additional information on managerial changes. As a result, the power of the model is reduced due to the additional noise introduced by these observations.

Secondly, estimation biases: one of the fundamental requirements of a matched-sample approach is that of controlling for important factors. The control sample of Dahya et al. is significantly larger (about three times the size) than the experimental sample. As size is a significant factor in so many studies of firm behaviour, failure to control for this may seriously bias the results.

Finally, misclassifications of executive changes: several factors suggest that some degree of misclassification of turnovers into routine and non-routine may have occurred because of the fact that this study uses a sample of CEO departures drawn from the Extel news service database. Findings, in Table 1 indicate that 85% of executives in the non-routine subset are aged between 60 and 65, compared with only 32% in the routine

subset. Assuming that the probability of retirement increases with an executive's age, these findings suggest that a proportion of the turnover events classified as non-routine might, in fact, be of a more routine nature.

To summarise the above findings, past research based on UK data reveals a negative relation between firm performance and top executive turnover whilst the issue of managerial entrenchment is still open to debate[6]. The striking limitation of all the above studies is, however, the absence of a proper and comprehensive classification of executive departures. Bearing in mind that this is a key issue in executive turnover studies, the lack of a right classification strategy may cause serious estimation errors.

There are two very recent studies based on UK data that examine the turnover-performance association by using a detailed and hence, improved classification strategy. In the first one, Dedman (2000) examines the determinants of non-routine CEO departures based on a sample of UK listed firms between 1990 and 1995. In the second one, Dahya, McConnell and Travlos (2001) analyse the relation between top management turnover and corporate performance studying a sample of 460 UK listed companies over the period 1988-1996. In both studies, the main research question addressed is whether the likelihood of CEO dismissal has strengthened following the Cadbury Committee's recommendations. Moreover, both studies find evidence that the disciplinary process has become stronger in the post-Cadbury regime.

Despite the valuable insights of the above studies, there are still two main criticisms. Firstly, the leading executive in each company for each year is taken to be the CEO or

[6] Conyon and Nicolitsas (1998) provide another study on executive turnover. This paper, however, concentrates on small to medium-sized UK companies.

the Managing Director (in Dedman's study) and the CEO or in very few cases the Executive Chairman (in the study of Dahya et al.). However, in the UK the title "Chief Executive Officer" has only comparatively recently been used to signal the top corporate position. Other titles such as Chairman and Managing Director are also used - especially in earlier periods. That means that the actual number of top executive departures identified in the above studies would be higher had they adopted a more comprehensive strategy of top executive identification. Secondly, the classification strategies applied in these studies are definitely better than the previous ones but still subject to measurement errors. For example, none of the studies performs a detailed analysis of top management departures due to retirement. Instead, both of them classify all retirements as routine departures. This, however, could lead to estimation biases since the term retirement could be a euphemism for a forced departure.

The current thesis contributes to the executive turnover literature in the UK by providing a comprehensive analysis that is less subject to the above limitations (to be fully discussed in Chapter 4). Finally, whilst the focus of the above papers is the impact of several corporate governance characteristics on the turnover-performance relation pre and post Cadbury the analysis in Chapter 4 concentrates on the circumstances under which poor performance may lead to a CEO job separation.

The chapter now continues with the discussion of prior evidence supporting the work undertaken in Chapter 5.

## 2.4 Turnover and Subsequent Organisational Changes (Chapter 5)

Top executive changes are important events for corporations because they can lead to reversals of past errors. More particularly, they may signal changes in future corporate decisions or the establishment of new policies. Accordingly, the following section reviews past papers that examine significant organisational changes following top management departures.

### *2.4.1 Managerial Turnover, Succession and Organisational Changes*

When researchers examine the relationship between CEO turnover and subsequent organisational changes they often focus on two factors: the type of the CEO turnover and the type of CEO succession[7].

Dennis and Dennis (1995) examine 1689 companies that experience a total of 1,480 changes in top management over the 1985 to 1988 period that were all announced in the Wall Street Journal. The sample includes 581 changes that involve a change in the top executive position (i.e. CEO or Chairman) and 107 forced resignations, 73 of which involve the top executive of the firm. Denis and Denis (1995) test the significance of median and mean changes in operating performance over the seven-year period centred on the year of the CEO turnover. They document that CEO changes are followed by increased operating improvements where firm performance is measured by changes in the industry-adjusted and unadjusted return on assets (ROA). Moreover, this association is more pronounced in the case of forced resignations than normal successions. Both

[7] Similar to the remark made in Section 2.3.1, it should be noted that this thesis concentrates on post-turnover restructuring when CEO turnover is the result of internal governance mechanisms. For organisational changes following large mergers see Healey, Palepu and Ruback (1992); following tender offers see Bhagat, Shleifer and Vishny (1990), and Denis (1994); following management buyouts see

forced resignations and normal retirements, however, exhibit a substantial amount of post-turnover corporate restructuring such as asset sales (59% and 56% respectively); employee layoffs and wage cuts (30% and 19% respectively); plant closings (18% and 12% respectively); other cost-cutting measures (19% and 9% respectively); and plans to refocus the business (7% and 5% respectively) Only the difference in the rate of cost-cutting programmes is significant at the 10% level[8].

Kang and Shivdasani (1995) address the same issues by using Japanese data. In addition to industry-adjusted return on assets, they also use *industry-adjusted excess stock returns and a binary variable that equals one if pre-tax operating income is negative*, as a proxy for extremely poor operating performance. Studying a sample of 270 Japanese non-financial firms over the period 1985-1990 they document evidence supporting that all three measures of performance improve significantly following non-routine departures from the President position. In contrast, routine turnovers do not result in significant post-turnover performance improvements.

Weisbach (1995) distinguishes his work from the above papers by concentrating on one particular type of corporate restructuring that of *divestitures of recent poorly performing acquisitions*. Such restructuring actions are easily observable and hence can yield valuable insight into the real effects of changes in management. Studying a sample of 270 large acquisitions done by 200 firms during the period 1971-1982, he documents that active boards not only fire inefficient CEOs but also reverse some of their

Kaplan (1989) and Smith (1990); following leveraged capitalisations see Palepu and Wruck (1992), and Denis and Denis (1993).

[8] Huson, Malatesta and Parrino (1999) extend the study of Denis and Denis (1995) in several ways. Their focus, however, is the investigation of the cross-sectional determinants of post-turnover performance changes such as board composition, ownership structure, and external take-over activity.

decisions, such as the acquisition of poorly performing divisions. More importantly, he ensures that these divestitures are not profitable acquisitions that were misclassified as unsuccessful, possibly because of accounting manipulation by incoming managers who seek to blame their predecessors for a poor acquisition.

From a slightly different perspective, two more studies investigate the association between CEO turnover and subsequent organisational changes by examining *the interaction between internal and external corporate monitoring mechanisms.* In the first one, Denis and Serrano (1996) examine the causes and consequences of top management changes following 98 unsuccessful control contests between 1983 and 1989. According to their findings, 34% of the sample companies are followed by increased CEO departures, and increased operating profitability. Moreover, performance improvements following unsuccessful acquisition attempts are greater in firms that experience top management changes; 72% of the firms with management turnover exhibit significant positive industry-adjusted changes in operating performance over the following three-year period in contrast with the no-turnover sample in which industry-adjusted performance changes are statistically insignificant. Finally, 35% of the turnover firms significantly restructure their operations while only 22% of the no-turnover firms do so.

In the second one, Mulherin and Poulsen (1998) analyse 270 proxy contests of the 1979-1994 period, and find that a significant number of firms that repel the raider of a friendly take-over still experience a change in the CEO position and also engage in post-contests restructuring. More specifically, they report that in the three years following the contests 71% of the 122 firms with management turnover proceed with the selling of

divisions, plant-closings, and write-down of assets compared to only 45% of the 85 firms that do not replace senior management. Overall, the evidence is consistent with the argument that CEO turnover events are likely to initiate major organisational shifts.

Khurana and Nohria (2000) provide a very recent investigation of the performance consequences of CEO turnover. The distinguishing feature of their study is that it incorporates in the analysis the *succession event*, and more importantly it shifts the analysis of turnover to the *complete turnover event.* That is, they treat turnover and succession as a coupled phenomenon and investigate the performance consequences under four possible scenarios: a) natural turnover followed by inside succession, b) natural turnover followed by outside succession, c) forced turnover followed by inside succession, and d) forced turnover followed by outside succession. Based on a sample of the Fortune 200 US firms over the period 1978-1993 they identify 221 CEO changes, of which 46 are coded as forced, and 17 are coded as forced departures followed by an outsider. Their results reveal that forced turnover followed by outsider succession improves subsequent firm performance in contrast with natural turnover followed by an insider, which has little effect on subsequent changes to firm performance. The results are consistent with established perspectives, which predict that the combination of forced turnover and outside succession is the most disruptive CEO turnover event.

Whilst all the above studies examine the organisational consequences of CEO turnover and/or succession, Clayton, Hartzell and Rosenberg (2000) investigate the impact of CEO turnover not only on subsequent operational changes but also on *stock price volatility*; the latter is defined as the standard deviation of daily shareholder returns. Similarly to Khurana and Nohria (2000), Clayton and his colleagues explore the

combined possible volatility effects of different departure types and different succession types. Their sample consists of 872 total turnover events between 1979 and 1995 out of which 152 are forced and 180 entail an outside succession.

Their analysis reveals three main findings. Firstly, CEO turnover is associated with significant volatility increases whereas stock price volatility increases by an additional twenty percentage points in the case of a forced CEO departure and by an additional nine percentage points in the case of an outside succession. These results are consistent with the view that forced CEO turnovers and/or outside succession increase the investors' uncertainty about the operating strategies and/or the abilities of the new CEO. Secondly, forced departures are associated with greater decreases in total assets and higher extraordinary items relative to voluntary departures. Finally, outside appointments replacing dismissed CEOs lead to greater asset sales than outside appointments following voluntary CEO departures. The latter finding supports the view that new CEOs and especially outsiders who replace dismissed CEOs are expected to bring in dramatic operational changes.

Up to now, the studies reviewed examine the effect of CEO turnover and CEO succession on subsequent organisational transformations. One aspect of organisational change that they do not address is *changes in the identities of top decision-makers in the firm*. Indeed, the departure of non-CEO managers can be another dimension to assess the relation between CEO departures and subsequent organisational changes.

Most prior work examining turnover outcomes for non-CEO managers use this form of turnover as simply a broader indicator of a top management change. Furtado and Rozeff

(1987) examine the association between subsequent share prices and management turnover for four top-level corporate posts: Chairman, Vice-Chairman, President and CEO. As discussed in Section 2.3.1, Warner et al. (1988) perform a series of firm-level logit regressions in which the dependent variable is whether there is a change in Chairman, CEO or President positions in the preceding year. Similarly, Denis and Denis (1995) and Mikkelson and Partch (1997) apply a broader definition of top management change (i.e. CEO, Chairman, President and Chair of the board) and then investigate the link between executive changes and firm performance.

Within a more international context, multiple definitions of top management turnover have also been used by other researchers studying non-US data. Based on a sample of 42 large German companies, 119 Japanese and 146 U.S. companies over the period 1980-1988, Kaplan (1994a, 1994b and 1997), provides a comparative study of the turnover-performance sensitivity, for representative directors in Japan, executive directors in the US and management board members in Germany. Similar studies have been done based on Spanish data (Gispert 1988); Belgian data (Renneboog 1996); and Italian data (Brunello et al. 2000).

In the UK there are three studies in which Chairman changes has been used as another indicator of executive turnover. Since all of them have been fully considered in previous sections, this part will just highlight the key issues of interest. In the first one, Franks et al. (1996) show that poorly performing companies experience a higher incidence of Chairman turnover than average performing companies. The association itself, however, between Chairman turnover and performance is not examined with further regression analysis. The negative Chairman turnover-performance relation is actually documented

in two recent studies by Dahya et al. (1998, 2001). In both studies, however, the modelling of the Chairman turnover is not the central focus, since departures from the Chairman position are identified only when there is no CEO role.

More importantly, none of the above studies (including the US) investigates the impact of CEO changes on the turnover likelihood of other non-CEO executives (e.g. Chairman). A very early study that attempts to link executive departures with the turnover of the leading executive is that by Helmich and Brown (1972). Based on a sample of 208 President changes over the period 1959-1969 and using partial gamma and chi-squared tests they document that organisations experiencing outside succession tend to be associated with a higher rate of departures and personnel shifts within two years after succession. The focus of the study, however, is the relation between successor type and changes among the company's executives; in contrast, they make no comparison between firms experiencing turnover in the President position and those firms experiencing no turnover in this position.

Farrell and Whidbee (2000) and Hayes, Oyer and Schaefer (2000) are amongst the very few who actually examine whether there is an association between CEO turnover and other non-CEO changes, when CEO turnover is the result of internal governance mechanisms[9]. In the first one, Farell and Whidbee (2000) use a matched-sample approach to investigate the likelihood of outside director departure in the four-year period following a forced CEO turnover. Studying a sample of 66 forced CEO turnovers

[9] Examples of studies that examine the relation between director turnover and CEO turnover when CEO turnover is the result of external control mechanisms are Gilson (1990) and Kini, Kracaw, and Mian (1995). In both studies, the authors suggest that increased director turnover is the consequence of directors being disciplined for poor performance. Finally, Hermalin and Weisbach (1988) also explore the relation between board turnover and CEO departures. Their focus, however, is *anticipated* CEO turnover (measured by CEO tenure and age) as opposed to *actual* CEO turnover.

and 66 firms that did not force their CEO between 1982 and 1992 and using standard probit regressions and random-effects probit regressions, their analysis generates four substantive results. Firstly, they document that outside directors of firms that force their CEOs are more likely to depart than outsiders of firms that do not experience a forced CEO turnover. Secondly, this association may vary depending on a number of certain corporate governance characteristics; directors that are closely aligned with the outgoing CEO and own little equity are most likely to leave the board. Thirdly, the directors of firms that perform poorly *following* forced CEO turnover are more likely to leave the firm. Finally, directors of firms that perform well *following* forced CEO turnover are more likely to remain on board and be rewarded for their services by gaining at least one more directorship.

The focus of the above study, however, is *outside director* departures rather than departures of other *top executives*. Moreover, due to the unavailability of data, this study is not able to determine whether an individual director's departure from the board is voluntary or is the result of pressure from other directors or stakeholders.

Schaefer and his colleagues (2000) are among the first ones to concentrate on the turnover of non-CEO top executive members and its link with CEO turnover. Specifically, they use panel data to assess the impact of CEO turnover on two main sub-groups of non-CEO executives: a) Chief Operating Officers (COOs) and Chief Financial Officers (CFOs), and b) other non-CEO executives. Studying a sample of 5,036 different executives of US banks between 1990 and 1999 they yield three main results. Firstly, turnover among non-CEO executives appears to be more closely related to firm performance than for CEOs. Secondly, the likelihood of a non-CEO turnover is

higher by approximately eight percentage points if the CEO turns over as well; moreover, this link is even stronger when firm performance is poor. Thirdly, they document that non-CEO turnover is not significantly impacted if the previous CEO's departure is routine (i.e. retirement). Finally, they report that the likelihood of a non-CEO turnover is sixteen percentage points higher when the CEO turns over and is replaced by an outsider.

Although this study breaks new ground, there are still three main limitations. Firstly, and similarly to the study of Farrell and Whidbee (2000), the analysis cannot identify the type of non-CEO turnover following the departure of the CEO, due to the unavailability of data. Secondly, it is difficult to draw general inferences from its analysis as it concentrates on a single industry, that of financial institutions. And finally, the quality of the data results in the construction of variables that suffer from measurement errors. More specifically Schaefer et al. (2000) classify CEO changes into routing and non-routine, where the only criterion for this classification is the age of the CEOs. Since, as already emphasised in the previous sections, such a classification strategy may lead to noisy measures of different types of CEO turnover, Schaefer and his associates are not able to provide strong evidence on the association between non-CEO turnover and forced CEO changes.

To summarise, most of the prior empirical work concludes that CEO departures are important economic events that may lead to dramatic organisational transformations, although only a couple of them address the issue of changes in the composition of top management teams. Much of the evidence reveals that organisational changes following CEO turnover are more pronounced if the departing CEO is forced. In addition to CEO

turnover, a limited number of papers expand the literature by documenting that organisational redirections are also likely if the new CEO is an outsider. Most of these papers, however, do not allow the relation to vary with the circumstances that fuel the CEO turnover. The exception to this has been two studies; Clayton, Hartzell and Rosenberg (2000) and Khurana and Nohria (2000) who both report that outsider appointments replacing forced CEO departures result in greater performance improvements and organisational restructurings.

In the light of this lack of direct evidence, there exists a stream of studies that could be used as indirect evidence of outside succession and subsequent organisational adjustments under different turnover circumstances. This line of research investigates the determinants of outside succession and in particular, whether poor firm performance and/or forced CEO departures are associated with the likelihood of an outside appointment. The following section provides an overview of this literature.

### *2.4.2 The Determinants of Outside Managerial Succession*

Based on a sample of 96 companies listed on the New York Stock Exchange Dalton and Kesner (1985) demonstrate that outside CEO successions are relatively rare in both poorly performing companies and those with relatively good performance. The results are invariant across two metrics of firm performance: a) a three-year average return on equity (ROE) prior to the succession, and b) a three-year average shareholder return prior to the succession. In contrast, their results reveal that outside successions appear almost exclusively in those firms with mid-range performance.

Warner et al. (1988) (whose study was fully discussed in Section 2.3.1) perform a more powerful test of the association between firm performance and outside appointments by studying a sample of 269 firms listed on the New York and American Stock Exchanges in the period 1963-1978. In contrast with Dalton and Kesner (1985), Warner et al. report that an outside top management appointment is more likely following poor firm performance. The estimate on shareholder returns is negative and significant whilst the estimated levels of stock performance in the twelve to seven months preceding the outside change are negative and higher than those of all changes.

Around the same time, Hermalin and Weisbach (1988) address the issue of outside succession from a broader perspective. In particular they investigate the determinants of *outside director*, rather than *outside CEO*, appointments. In their study, which is based on a sample of 142 firms over a thirteen-year period, i.e. 1972-1983, they find that the likelihood of outside succession is associated with deteriorating firm performance. As they highlight, however, it seems that it takes some time for firms to add outsiders to the board. Both current and prior year's stock returns are negative whilst only lagged performance turns out to be significant.

Friedman and Singh (1989) predict that the better the pre-succession performance, the more likely an inside successor is to be appointed. Based on information on the succession type, which they received through mail surveys from 130 Fortune 500 firms, and using logistic regressions their results fail to support their hypothesis. According to their findings, prior firm performance - measured by ROE - is not a significant predictor of the succession origin.

Drawn on a sample of 472 CEO succession events of the top 800 US firms during the period 1971-1985, Cannella and Lubatkin (1993) extend the above analysis by exploring not only if prior poor firm performance increases the likelihood of an outside succession but also *whether outside appointments are associated with a forced CEO departure*. Their results reveal a negative and significant relation between pre-dated firm performance and outside succession and in particular in instances of CEO dismissal; in contrast, the relation is not significant for the non-dismissal cases. Moreover, the likelihood of an outside succession is reported to be higher following a CEO dismissal.

Finally, three other more recent studies that examine the determinants of outside top management succession were fully discussed in previous sections. This part will just summarise their results on the issue of outside succession. In the first one, Kang and Shivdasani (1995) report that only extreme levels of performance increase significantly the likelihood of an outside appointment. In contrast with Cannella and Lubatkin (1993), outside succession does not appear to be influenced by whether the departure of the outgoing President is forced. In the second one, Parrino (1997) finds that outside appointments are more likely when the level of prior accounting performance is low relative to that at other industry firms. In the last one Huson et al. (2001) also report that outside appointments are more likely following a decrease in prior year's stock returns and ROA. Furthermore, they argue that there is an increased propensity on the part of directors to appoint outside CEOs who are likely to make changes when they are needed the most. Accordingly, their results reveal that the number of fired CEOs replaced by outsiders has increased from 50% in 1971 to 57.1% in 1994.

To summarise the issue of outside managerial succession, the majority of previous research concentrates on the determinants rather than the consequences of such an event. In the presence of this research gap, evidence on the determinants of outside succession could offer valuable indications on its organisational implications. Nevertheless, research findings regarding the association between outside appointments and a) firm performance, and b) the type of CEO turnover are contradictory and hence, inconclusive.

The discussion in Section 2.4 singled out a number of controversies regarding the implications of CEO turnover and outside succession. More importantly, it singled out the absence of prior empirical work investigating the association between non-CEO turnovers and CEO turnover/succession. Chapter 5 of this thesis attempts to expand the literatures discussed in this section by providing evidence on the association between the probability of Chairman turnover and: a) the departure of the company's leading executive, and b) the origin of the successor (i.e. insider versus outsider). This is less common in the literature, which most often models only CEO turnover, and of particular interest in the UK. Moreover, Chapter 5 advances prior work through a number of certain methodological and conceptual improvements. All this, however, will be fully explained in Chapter 5.

The literature review finishes with the discussion of the empirical background of Chapter 6 in the following section.

## 2.5 Turnover and Investment Decisions (Chapter 6)

The last part of this chapter summarises the main findings of previous research examining the implications of top management departures for the company's investment decisions taken prior to and at the time of the departure. This itself, however, requires a review of the literature on economic investment models and an introduction of the particular empirical investment specification used in Chapter 6.

### *2.5.1 Economic Models of Investment*

Considering the enormous literature written on the topic, the aim of this section is to summarise and give the basic intuition behind the important elements of investment models. The modern literature on investment stems primarily from the neo-classical theory originated by Dale Jorgenson and his associates (e.g. Jorgenson 1963; Hall and Jorgenson 1967; Jorgenson 1971).

The starting point in the early neo-classical approach is the firm's optimisation behaviour. In particular, the objective of the firm is to maximise the present discounted value of net cash flows subject to technological constraints summarised by the production function. The aim of the model is to determine the desired capital stock position, based on the profit maximisation considerations of the firm, and then to identify the adjustment mechanism from the current capital stock position to the desired position. Jorgenson's model can be viewed as a successful step towards a theory of investment, because it considers the durability of capital with its forward-looking nature. Nevertheless, the main shortcoming of this approach is that is does not explicitly consider the optimal adjustment path for the capital stock when it is away from that level (Blundell, Bond and Meghir 1996).

Following Jorgenson, investment models apply a particular dynamic adjustment mechanism by introducing the concept of the "adjustment costs". In this approach, the firm faces adjustment costs as an increasing convex function of the investment rate when it is altering its investment. Models of this type, which dominated econometric research in the last decade, introduce explicitly the dynamic elements into the theory by describing the complete evolution of the capital stock from the underlying optimisation problem (Blundell et al. 1996). The thesis follows this approach of investment modelling.

Adjustment costs can be thought of as a loss in output or in revenue of the firm when it diverts its resources from production to investment, or as installation costs when new capital is introduced, or as dismantling costs when existing capital is withdrawn. For example, new investment plans require new administrative activities, new research and development, or new capital installations may require additional staff training or alter production activities. Since these costs are increasing at the margin, large changes in the capital stock imply prohibitive adjustment costs. Consequently, the firm is induced to respond with a sequence of smaller changes. As Blundell, Bond and Meghir (1996) explain, optimal behaviour will then be forward-looking, and the firm will respond differently to temporary and permanent changes in, for example, the demand for its output. As a result, the current level of investment is affected by both past developments and expectations of future conditions.

With respect to empirical models, three main structural specifications derived explicitly from this approach: a) the Q model with the work of Summers (1981) and Hayashi (1982); b) the Abel and Blanchard (1986) present value model; and c) the Euler

equation model that was developed in the investment literature by Abel (1980). In their review, Blundell, Bond and Meghir (1996) provide a thorough discussion of the above investment specifications, paying particular attention to their central features and limitations. Compared with the other two models, the Euler equation has a number of attractive characteristics (to be discussed in Chapter 6). Accordingly, the current thesis models company investment following the Euler equation.

An empirical investment model based on the Euler equation approach was considered, among others, by Bond and Meghir (1994)[10]. A full treatment of the model is included in Chapter 6. In summary, current investment is a function of prior year's investment, cash flow, debt and sales. Based on an unbalanced panel of 626 quoted UK manufacturing firms over the period 1974-1986, Bond and Meghir (1994) demonstrate that the dynamic relationship between this period's investment and its previous rate is broadly consistent with the data. Contrary to theoretical predictions, lagged cash flow turns out positive and significant, even after controlling for output fluctuations (imperfect competition) and debt (bankruptcy costs-taxes). Bond and Meghir (1994) argue that this result is consistent with the liquidity constraints prediction, i.e. investment expenditure may be constrained by the availability of internally generated funds.

Having broadly commented on the two main types of investment models and introduced the empirical specification adopted in this study, the section continues with a detailed discussion of prior empirical work on earnings management techniques associated with

[10] For other similar studies see Shapiro (1986), Whited (1992), Pfann and Palm (1993), and Hubbard, Kashyap and Whited (1995).

top executive departures. Particular attention is paid to those cases where earnings management is performed through investment choices.

### *2.5.2 Managerial Turnover and Investment Choices*

Earnings management strategies have been examined in a variety of contexts, including compensation plans (Healey 1985), provisions for bad debts (McNichols and Wilson 1988), labour contract negotiations (Liberty and Zimmerman 1986), import relief investigations (Jones 1991), management buyouts (De Angelo 1986; Perry and Williams 1994), proxy contests (De Angelo 1988), financially distressed companies (Defond and Jiambalvo 1994; De Angelo, De Angelo and Skinner 1994), take-over bids (Eddey and Taylor 1999).

Studies of earnings management strategies within the context of executive turnover are particularly sparse. Most of the explanations offered in the literature regarding the behaviour of financial variables surrounding executive departures involve mainly three non-mutually exclusive classes of potential managerial discretion (Murphy and Zimmerman 1993). Firstly, outgoing top executives approaching a *known departure* (e.g. retirement) are likely to make accounting or investment decisions to increase earnings (and earnings-based compensation) in their final year at the expense of future earnings (the "horizon" hypothesis). Secondly, outgoing CEOs in *poorly performing companies* threatened by termination take income-increasing accounting or investment decisions in an attempt to cover-up the firm's deteriorating performance and hence, delay their termination (the "cover-up" hypothesis). Finally, *incoming CEOs* make income-decreasing accounting or investment decisions (e.g. write off unwanted operations and unprofitable divisions) in order to boost future earnings at the expense of

the transition-year earnings and hence, blame the bad performance to their predecessor and establish their tenure (the "big-bath" hypothesis).

The majority of the studies in this literature focus on choices of accounting policy. The current section does not provide an extensive review of this part of the earnings management literature. Instead the section starts with a brief review of these studies. It then proceeds with a detailed discussion of earnings management studies associated with executive turnover, where the type of managerial discretionary behaviour is due to the horizon and/or the cover-up phenomenon and earnings management is performed through investment decisions.

Accounting choices span a broad spectrum of alternatives, ranging from highly visible changes in accounting methods to much less obvious bias in accounting estimates. Early studies suggest strong associations between large discretionary write-offs and executive turnover. For example, based on a sample of 36 US firms that experienced a top management change as opposed to a sample of 100 US firms that experienced a non-top management change and a sample of 100 US firms that did not experience a change at all, Moore (1973) reports that discretionary accounting decisions (e.g. write-offs) are more likely to be made in a period of a change in management. Strong and Meyer (1987) focus on a sample of 120 US firms who made large discretionary write-offs over the period 1981-1985. According to their results, 39% of the firms experience a senior management change in the period of the write-off. Finally, Elliott and Shaw (1988) analyse the behaviour of 240 firms during 1982-1985 using matched pair samples. Their results reveal that the most significant difference between non-write off firms and write-

off firms is the relatively high occurrence of senior management changes in the write-off firms.

Pourciau (1993) focuses her investigation on the discretionary accounting choices of departing CEOs based on her interesting insight that the personal gains from earnings management are likely to be higher after *non-routine CEO changes* than routine CEO changes. She argues that before routine CEO changes, the successor may monitor the financial reporting decisions of the retiring CEO. And subsequently the retiring CEO, as a continuing member of the board of directors, may monitor the financial reporting decisions of the successor. Furthermore, a weak profit reports poorly on both CEOs, discouraging the retiring CEO from inflating earnings before stepping down. Based on a total of 73 non-routine CEO departures, Pourciau's results fail to support the cover-up hypothesis, but do support the big-bath hypothesis.

Finally, two more studies use Australian data to investigate the big-bath hypothesis where managerial discretionary behaviour is observed through accounting choices. In the first one, Wells (2000) draws on a sample of 65 CEO changes in Australia's top 100 listed companies over the period 1984-1994 and reports only weak evidence of negative unexpected accruals in the period of CEO change, but stronger evidence of downward earnings management through abnormal and extraordinary items. Contrary to his hypotheses, Wells finds some evidence of negative earnings management in the period following the CEO change. In the second one, Godfrey, Mather and Ramsay (2001) use a sample of 19 CEO retirements and 44 CEO resignations during 1992-1998 and document downward earnings management in the year of the CEO change and upward earnings management in the year after the CEO change whilst both types of

discretionary behaviour are strongest for the sub-sample where the CEO change was due to a resignation. In contrast with Wells (2000), Godfrey et al. (2001), therefore, find evidence supporting the big-bath hypothesis.

Real cash flow choices, such as changes in investing decision at the time of CEO departure have, however, received much less attention in the earnings management literature[11]. The horizon hypothesis was first empirically investigated by Butler and Newman (1989) who study a sample of firms that experienced CEO departures in 1982. They focus on changes in finished-goods inventory, capital expenditures and R&D surrounding the CEO departures. Butler and Newman find no evidence that the departing CEOs systematically manipulate these variables to increase short-term earnings performance. They suggest that their inability to document evidence in support of the horizon problem could be due to their failure to isolate the circumstances under which the problem is more pronounced.

Following Butler and Newman (1989), Dechow and Sloan (1991) provide a more powerful test of the horizon problem by focusing on the circumstances in which managers' incentives to engage in discretionary behaviour are the strongest. Accordingly, their analysis concentrates on: a) R&D expenditure: the greater the negative impact of the investment decision on the firm's short-term profitability the more pronounced the horizon problem, and b) firms that have a top executive compensation plan that is tied to earnings: the stronger the link between CEO compensation and earnings performance the more pronounced the horizon problem.

[11] Baber et al. (1991) and Perry and Grinaker (1994) present evidence consistent with the hypothesis that managers time R&D expenditure to smooth reported income. They do not, however, explore the above managerial discretionary behaviour within the context of executive turnover.

R&D expenditure is measured in two different ways: a) the difference in R&D scaled by sales, and b) the continuously compounded growth rate of R&D.

Drawn on a sample of 405 manufacturing firms in R&D-intensive industries (a total of 58 CEO changes ) from 1974 to1988 and using regression analysis, they find that the growth in R&D expenditures is reduced during the CEOs' final years in office. In addition, they demonstrate that the reductions in R&D expenditures are mitigated through CEO stock holdings, where the latter is measured by the value of the ordinary and option holdings as a proportion of the total CEO salary and bonus compensation. Dechow and Sloan (1991) argue that the observed decreases in R&D expenditure around CEO departures are consistent with the horizon predictions, since CEOs who are 64 or 65 years old (and hence are close to retirement) are more likely to cut R&D. Finally, they demonstrate that R&D reductions cannot be explained by poor share performance (that is often argued to be related with); the coefficient estimate of abnormal stock returns is negative but not significant under both definitions of R&D expenditure.

The latter finding, however, could be attributed to the particular sampling process of the study. Specifically, the age of the majority of the sample's departing CEOs (60%) is 64 years and above whilst only seven executives are below 58 years old. The majority of the companies have mandatory retirement policies at the age of around 63 whilst a number of papers has demonstrated that routine departures (e.g. retirements) are not related to firm performance (Coughlan and Schmidt 1985; Warner et al.1988). The above, therefore, could explain the fact that Dechow and Sloan find no evidence of poor

performance prior to both the CEO departures and the reductions in investment expenditure.

In contrast with Dechow and Sloan (1991), Gibbons and Murphy (1992) find no direct evidence in support of the prediction that as managers approach retirement they reduce investment projects. Instead of the growth rate of R&D expenditure they focus on the level of three measures of corporate investment: a) R&D expenditure, b) advertising expenditure, and c) capital expenditure. Based on a sample of 1,631 CEOs who leave office during the 1970-1988 they construct each CEO's investment profile, i.e. the time series of investment expenditures beginning with the CEO's first year in office and ending with the first full fiscal year of his successor.

Their analysis provides evidence suggesting that all three types of corporate investment increase rather than decrease as the CEO nears retirement. Results remain robust even after controlling for market-wide trends in investment expenditure, different lengths of CEO tenure and CEO retirement age. In attempting to replicate Dechow's and Sloan's results, Gibbons and Murphy find that estimates of declining R&D growth surrounding management transitions are highly dependent on both model specification and sample construction. An important criticism of this study is, however, that Gibbons and Murphy (1992) do not identify the departure reason. Instead, the entire analysis is based on the *assumption* that CEOs retire, since 60% of them were between 60 and 66 years old when they left.

Finally, Murphy and Zimmerman (1993) depart from previous studies by estimating the extent to which changes in potentially discretionary variables are explained by poor

economic performance rather than by direct managerial discretion with the explicit incorporation of the endogeneity of CEO turnover. In their study, they analyse simultaneous changes in several variables. These include: a) R&D expenditure, b) advertising expenditure, c) capital expenditure, d) accounting accruals and earnings, e) sales, f) assets and g) stock prices. In contrast with Dechow and Sloan (1991), they document little evidence supporting the horizon hypothesis; instead declines in the growth rate of R&D, advertising and capital expenditures preceding departures are better explained by the overall performance of the firm. Controlling for firm performance results in insignificant departure year dummy variables in the R&D models. Controlling for the endogeneity of CEO turnover, through a two-stage regression analysis, results in insignificant departure year dummies in the majority of the rest discretionary-variable models.

Murphy and Zimmerman (1993) are actually the first to explicitly investigate the cover-up hypothesis in the context of CEO turnover where investment choices are used to measure managerial opportunistic behaviour. In particular, another important contribution of this study is that it provides a stronger test of the horizon and the cover-up hypotheses by focusing on certain sub-samples in which the above phenomena are predicted to be more pronounced. Accordingly, Murphy and Zimmerman (1993) partition the entire sample in three main ways. Firstly, into those cases where firm performance is above the median (i.e. superior performers) and those cases where performance is below the median (inferior performers). Secondly, into routine CEO departures and non-routine CEO departures. Thirdly, into routine CEO departures with superior performance and non-routine CEO departures with inferior performance. The horizon hypothesis is predicted to be stronger in the cases of superior performers and/or

routine departures whilst the cover-up phenomenon is expected to be more pronounced in the case of inferior performers and/or non-routine departures.

The analysis fails to support the horizon hypothesis whereas it provides some evidence consistent with the cover-up predictions. For example, Murphy and Zimmerman document that non-routinely departing CEOs reduce capital expenditure more than routinely departing CEOs in their final years, which is inconsistent with the horizon hypothesis. Furthermore, they report that accruals are higher in the years before CEO turnover for inferior-performing CEOs than superior-performing CEOs, suggesting they are covering up. Nevertheless, accruals are not significantly higher before CEO turnover for non-routine than routine departures. Their evidence therefore, does not consistently support the cover-up hypothesis.

Undoubtedly, Murphy and Zimmerman (1993) provide a very comprehensive analysis of the investment behaviour surrounding CEO turnover. Nevertheless, a number of interesting observations are worth mentioning. Firstly, partitioning CEO changes into routine and non-routine based on the age of the departing CEO is very likely to lead to misleading conclusions. A number of studies, including the current thesis, argue that a rigorous executive turnover classification requires more and better information (Warner et al. 1988; Weisbach 1988; Huson et al. 2001). Secondly, another problem arises in comparing the routine and non-routine CEO change samples. As Smith (1993, p.342) points out "the cover-up hypothesis predicts that earnings are inflated to conceal poor performance before non-routine CEO changes. The horizon hypothesis predicts that earnings are inflated before normal retirements. If both hypotheses are true, significant differences between the two samples may not be detected". Finally, as Murphy and

Zimmerman (1993) argue any conclusion regarding managerial discretion is conditional on an assumption about whether the incoming or the outgoing CEO controls the financial variables in the transition year (i.e. the year of the change). And until a more accurate way of determining which has control of the transition year is found, the power of the tests to detect managerial discretion and the ability to distinguish among the various explanations is compromised.

The evidence on the whole issue is mixed, and still an under-investigated area. Moreover, most of the findings come from the United States. Apparently, there has been extremely little research done on the relation between executive turnover and managerial investment behaviour, in the UK. The only available work is an unpublished study by Conyon, Machin and Menezes-Filho (1997) who investigate the horizon hypothesis based on a sample of 90 top British CEOs who left office during the period 1970-1994. They report results based on two different methodologies, the first focusing on investment profiles over the entire executive careers, and the second based on a before and after analysis of what happens to investment at and around the time surrounding CEO turnovers. Conyon et al. show that investment seems to decline during the last few years of an executive's career based on the first approach whilst the second approach fails to support the hypothesis. Finally, consistent with Dechow and Sloan (1991) they demonstrate that executive departure is less associated with a cutback in investment if the CEO holds a significant portion of the company's ordinary shares.

Despite the valuable insights of the above study, it suffers from certain criticisms most of which arise from the fact that the study is a very preliminary one and hence there is a number of measurement and specification problems. Finally, a very important limitation

of this paper is that information regarding CEO departures is based on a survey carried out in 1994 among a sample of UK quoted companies. Bearing in mind that the majority of the companies have incentives not to review truthfully their CEOs' job separation (Weisbach 1988), there is a good reason to believe that the measure of CEO departure adopted in this study is subject to considerable noise.

The work in Chapter 6 is the first rigorous study of investment decisions of departing CEOs based on UK data. Specifically, the chapter concentrates on two different types of managerial opportunistic behaviour, namely the horizon phenomenon and the cover-up phenomenon. Moreover, the quality of the data of the current thesis enables Chapter 6 to extend the overall literature in a number of ways that will be fully explained at a later stage.

## 2.6 Concluding Remarks

This chapter has introduced the fundamental concepts behind the issues investigated in the current thesis. The chapter began with a review of the property rights theory and the principal-agent literature whereas it also discussed the circumstances under which corporate governance issues are significant. It then continued with a comprehensive review of prior empirical work on the three main topics addressed in the thesis. These include: a) the association among executive turnover, prior firm performance and managerial stock ownership (to be examined in Chapter 4), b) the relation between executive turnover and subsequent major organisational transformations (to be examined in Chapter 5), and c) the behaviour of corporate investment at the time of executive turnover (to be examined in Chapter 6).

As highlighted in the above sections, the strengthening of prior evidence on all three issues is largely a result of the classification strategy of managerial departures applied. The contribution of much of the work presented in the following chapters of this thesis stems from the richness and the quantity of the data collected, which for the first time allows an accurate identification of top management departures and a detailed categorisation of them. The next chapter describes in detail the structure and content of the data.

# CHAPTER 3

# The Data

## 3.1 Introduction

The three main empirical chapters in this thesis were all based on a unique and very rich data set. The variables collected and used in this study can be split into two groups: a) management specific, and b) company specific. The objectives of this chapter are threefold. Firstly, to describe the sample selection process. Secondly, to describe the collection and construction process of the study's variables. Finally, to cast new light on the profile of top management teams in UK companies.

The remainder of the chapter continues as follows. The next section illustrates how the final sample of companies of the study was selected. Section 3.3 illustrates how the variables were collected. It starts with the management specific variables. The identification of top management changes and the classification of these departures were two very important tasks. Consequently, Section 3.3.1 includes a detailed discussion of these processes whilst several real examples of top management turnover events are provided wherever possible. It then continues with the description of the rest managerial variables, i.e. stock ownership, age, tenure and type of succession. Throughout this section several trends and findings regarding the UK top management teams are reported. Company specific variables are explained in Section 3.3.2, which provides a general overview of these indicators. However, for ease of expositions, the

construction and operationalisation of these variables will be further discussed in the chapters in which they are applied.

## 3.2 Sample Selection Procedure

This study was based on a sample of the top 460 UK companies, by market capitalisation, listed on the London stock market over the period 1990-1998. The companies were selected as follows. Using Datastream and excluding all investment trusts and the repetitions of those firms that had two classes of shares listing on the London Stock Exchange (e.g. B or Non-Voting shares), the top 300 UK companies ranked by market capitalisation on 1st January each year were included.

In each of the separate years over 1990 to 1998 the largest 300 companies have, of course, changed as some companies exited the list (e.g. through take-over, death or decline in capitalisation) and other firms entered. Nonetheless, it is important to emphasise that once a company entered the top 300 list at some point during the 1990-1998 period, it stayed in the sample for the entire period as long as it continued to be listed on the London Stock Exchange and irrespective of its market value. So, for example, if company A became one of the top 300 UK firms in 1994, information for it was entered for all the years - before and after 1994 - during which it was listed, and even though it may have dropped out the top 300 list due to a decline in its market capitalisation. Hence, companies leave the sample only when they become de-listed because of take-over, bankruptcy etc.

This non-random exit may generate some attrition bias. In particular, since exit depends on failing to obtain a stock market quotation this sampling process may be correlated

with shocks to the managerial departure likelihood. In other words, firms leave the panel as a result of economic processes such as take-over which may be associated to the event of management turnover. CEO turnover due to take-overs, however, is a result of the external control mechanisms and therefore, missing out such turnover events does not particularly complicate the findings of the current thesis, whose objective - as emphasised in Chapter 2 - is to shed light on the effectiveness of internal monitoring institutions (e.g. the directors' board and large shareholders).

The above selection procedure resulted in the main data set that consists of an unbalanced panel of 460 UK companies quoted on the London stock market over the period 1990-1998. Out of the 460 companies in total, there exist 292 firms (approximately 63.5% of the total sample) which were listed during the entire 1990-1998 period, 98 companies (21.3%) that were de-listed at some point during the 1990-1998 period and, 70 companies (15.2%) that were quoted on the London Stock Exchange some time after 1990 and remained quoted until 1998. The names of the companies included in the sample are listed at the end of the thesis in Appendix 1.

In addition to Datastream, the Changes of Names 1965-1998 (1999) was also used to identify companies that changed their name during 1990-1998 and the London Share Price Database Reference Manual, 1997 (LSPD) to identify the first date on which the company was listed on the London Stock Exchange (birth date) and the day on which the company ceased to exist (death date) due to take-over, merger or liquidation. This process is discussed in detail in the following sections.

## 3.3 The Variables

A total of 39 variables were collected for each company for each year. A full listing of these variables together with brief definitions and the appropriate codings are given in Appendix 2 at the end of the thesis.

The variables collected and used in this study can be split into two main groups. Firstly, management specific variables that naturally are dependent on the individuals named as the company's top managers (the identification of which is fully explained in Section 3.3.1.1) and secondly, company specific variables that are unchanged irrespective of the choice of company managers. The following sections explain each variable, with the name of the variable shown capitalised in brackets, and also describe in details their data collection process.

### *3.3.1 Management Specific Variables*

Executive specific variables include the following:

- Identification of top management changes
- Classification of top management changes
- Stock ownership
- Birth dates
- Appointment dates
- Type of succession

#### *3.3.1.1 Identifying Top Management Changes*

The names (NAME) and the type of position (E/N), i.e. executive or non-executive, of each company's Chief Executive Officer (CEO), Chairman (CHAIR), and group

Managing Director (MD)-wherever applicable- were manually recorded from the September issue of the PriceWaterhouseCoopers (PWC) Corporate Register (Companies Section). This procedure was repeated for each September edition of the PWC Corporate Register from 1990 to 1998.

The above data collection process was particularly time-consuming and labour-intensive. Up to now information regarding the composition of the top management teams of UK listed companies has not been available in a format that enables data processing, i.e. electronic form. Consequently, the current thesis has made a substantial contribution in the mapping of senior management changes by constructing a unique data set that can be utilised as the basis of future investigation of several issues related with executive turnover.

Moreover, besides the PWC Corporate Register a number of other sources had to be used in order to supplement the data. In particular:

a) Data for many companies was not found in the PWC Corporate Register because they existed under a different name. Through Changes of Names 1965-1998 (1999) it was possible to identify those companies and then by referring back to the PWC Register to fill in the missing information.

b) As already mentioned, data for a number of companies was not found in the PWC Corporate Register for the whole period under investigation (i.e. from 1990 to 1998). The reason for that was twofold: a) companies were not yet listed in the London Stock Exchange and/or b) companies did no longer exist because of various

reasons such as take-over, merger, liquidation, receivership, etc. In these cases, the combined use of Datastream and LSPD made it possible to:

- Locate those companies that were quoted on the London Stock Exchange later than the year under investigation. Moreover, the term birth date (CBD) was used to denote the first date on which a stock exchange code number applied. Top management information was not entered for the years preceding the birth date.
- Identify dead companies and the reasons for their death, where applicable. LSPD, in particular, provided information on the death date (CDD) of companies that ceased to exist at any time up to 1996 and Datastream provided information on the death date of companies that ceased to exist after 1996, since the former database does not cover that period. Top management information was not entered for the years following the death date.

c) In a number of cases, data for the birth year and/or the death year was not available from the September issues. The main reason was that companies entered the Stock Exchange after the September issue of the PWC Corporate Register was published or ceased to exist before that date. For these companies, missing observations were filled in by:

- Investigating the rest of the issues. The PWC Corporate Register was published twice from 1990 to 1994 and quarterly from 1995 to 1998.
- Reading company accounts available from LASER D. In particular, through this database it was possible to obtain information on the composition of the top management team of companies not available in the PWC Corporate Register issues and with missing years no earlier than 1993.

- Using the Extel Financial UK Quoted Companies – Annual Cards for those companies not available in the PWC Corporate Register issues and with missing years from 1990 to 1992.

This process resulted in a total of 1385 different top managers that were in office from 1990 to 1998. Consistent with the view that "our world is male-dominated", female top managers account for less than 0.7% of the total. Tables 3.1 and 3.2 illustrate a number of developments regarding the composition of top management teams in the UK. The first one presents the total number of CEO, Chairman and group MD positions by year. The second one presents the number of executive and non-executive Chairman positions as well as the number of cases in which the company's Chairman holds a combined role, i.e. he is also the CEO or the group Managing Director.

**Table 3.1: Chairman, CEO and Group MD Positions by Year, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Year | Chairmen | CEOs | Group MDs |
|---|---|---|---|
| 1990 | 374 | 223 | 165 |
| 1991 | 386 | 223 | 177 |
| 1992 | 386 | 240 | 161 |
| 1993 | 390 | 256 | 130 |
| 1994 | 390 | 270 | 124 |
| 1995 | 394 | 281 | 114 |
| 1996 | 387 | 282 | 101 |
| 1997 | 380 | 284 | 84 |
| 1998 | 362 | 278 | 78 |
| **Total** | **3449** | **2337** | **1134** |

**Table 3.2: Executive Chairmen, Non-Executive Chairmen and Combined Titles by Year, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Year | Executive Chairmen | Non-Executive Chairmen | Combined Titles |
|---|---|---|---|
| 1990 | 269 | 105 | 108 |
| 1991 | 280 | 106 | 96 |
| 1992 | 253 | 133 | 82 |
| 1993 | 240 | 150 | 62 |
| 1994 | 214 | 176 | 47 |
| 1995 | 205 | 189 | 36 |
| 1996 | 176 | 211 | 33 |
| 1997 | 173 | 207 | 30 |
| 1998 | 155 | 207 | 21 |
| **Total** | **1965** | **1484** | **515** |

As already highlighted in Chapter 2, a comprehensive analysis of senior management changes in the UK should include departures not only from the CEO position but also from the positions of Chairman and Managing Director. This is mainly because, UK companies have gradually adopted the title "Chief Executive Officer" to signal the top corporate position. During the early years, alternative titles such as "Chairman" or "Managing Director" were actually more often used. The pattern that emerges from both tables confirms this argument. As shown in Table 3.1, the number of CEO positions has increased from 223 in 1990 to 278 in 1998 whilst the number of Group Managing Director posts has decreased from 165 in 1990 to 78 in 1998. In contrast, Table 3.1 demonstrates that there is no monotonically time-series trend in the total number of Chairman positions.

Nevertheless, a striking observation made from Table 3.2 is that the number of executive Chairmen has decreased by more than 42% over the period 1990-1998 whereas the number of non-executive Chairmen has increased by 97% during the same

period. This finding reinforces the argument that as the CEO title is increasingly used to denote the company's leading executive, there is a shift in the Chairman's responsibilities who now becomes less involved with "steering the ship" (i.e. run the company) and more involved with "setting the tone and blowing the whistle" (i.e. run the board and monitor the CEO).

Finally, according to Table 3.2, in 1990 108 (29% of the total sample) UK companies had a Chairman-CEO/MD dual position whilst in 1998 only 21 (6% of the total sample) companies kept these roles combined. Consequently, there has been approximately an 81% fall in the number of cases in which the positions of the Chairman and CEO or group Managing Director are held by a single individual. Bearing in mind that the first Code of Best Practice in corporate governance published by the Cadbury Committee in December 1992 recommended that companies separate the two roles, evidence suggest that companies seem to have complied with these proposals (although it should be noted that, as shown, the declining trend had already started taking place prior to 1992). This is consistent with the results of Dahya et al. (2001) who report that prior to Cadbury, the Chairman of the board also held the position of top manager in 36.5% of the companies; after Cadbury, that fraction dropped to 15.4%.

Management changes were identified by comparing management team composition across years. That is, the identity of the three top managers by name over a nine-year window from 1990 to 1998 for each firm was followed. Top executive changes were identified based on the following assumptions:

a) Top management changes involving only reassignment of the three titles (i.e. Chairman, CEO and MD) were excluded. One of the main objectives of the current study is the investigation of an association between poor firm performance and forced CEO departures. Title changes are less likely to be related to poor performance and, excluding them should enhance the ability to detect a relation between firm performance and subsequent management changes. It should be noted, however, that the analysis includes 3 cases of title-reassignment. These are: a) A. Roddick, CEO of Body Shop who became Co-Chair; b) R. Montague, executive chairman of CTR, who was initially moved to the position of CEO and in a year's time he was entirely removed from the company and c) E. Pountain, executive chairman and CEO of Tarmac who was demoted to non-executive chairman. In all three cases, top managers agreed to take a role with a lot less responsibilities whereas a new CEO joined the company.

b) In 134 cases two or even three persons shared the same position (i.e. joint positions). In these cases, a departure of any of the managers was regarded as one observation (even if the rest of the joint managers remained at the position).

c) Simultaneous departures (i.e. departures of two persons, holding different titles, on the same date) were treated as two different observations.

The following table presents an extract from the actual Excel data sheet that was used in the current analysis:

**Table 3.3: Identifying Top Management Changes-Sample of the Actual Excel Sheet**

| DSCODE | Name | *Role* | Issue 4 | | Issue 6 | | Issue 8 | |
|---|---|---|---|---|---|---|---|---|
| | | | 1990 | N/E | 1991 | N/E | 1992 | N/E |
| 901318 | AAH | *Chair* | W M Pybus | E | W M Pybus | E | W M Pybus | E |
| 901318 | AAH | *CEO* | N/A | N/A | N/A | N/A | N/A | N/A |
| 901318 | AAH | *Group MD* | N/A | N/A | N/A | N/A | A W Revell | E |
| 900489 | ABBEY NATIONAL | *Chair* | W O Adamson | N | W O Adamson | N | C S Tugendhat | E |
| 900489 | ABBEY NATIONAL | *CEO* | P G Birch | E | P G Birch | E | P G Birch | E |
| 900489 | ABBEY NATIONAL | *Group MD* | N/A | N/A | N/A | N/A | N/A | N/A |
| 917597 | AEGIS GROUP | *Chair* | P J Scott | E | P J Scott | E | P J Scott | E |
| 917597 | AEGIS GROUP | *CEO* | P J Scott | E | P J Scott | E | P J Scott | E |
| 917597 | AEGIS GROUP | *Group MD* | N/A | N/A | N/A | N/A | N/A | N/A |
| 903357 | AGGREGATE INDUSTRIES | *Chair* | P Parker | N | P Parker | N | P Parker | N |
| 903357 | AGGREGATE INDUSTRIES | *CEO* | R Kettle | E | P W G Tom | E | P W G Tom | E |
| 903357 | AGGREGATE INDUSTRIES | *Group MD* | N/A | N/A | N/A | N/A | N/A | N/A |
| 900232 | ALLIED DOMECQ | *Chair* | D Holden-Brown | E | M C J Jackaman | E | M C J Jackaman | E |
| 900232 | ALLIED DOMECQ | *CEO* | R G Martin | E | A J Hales | E | A J Hales | E |
| 900232 | ALLIED DOMECQ | *Group MD* | N/A | N/A | N/A | N/A | N/A | N/A |
| 901393 | AMSTRAD | *Chair* | A M Sugar | E | A M Sugar | E | A M Sugar | E |
| 901393 | AMSTRAD | *CEO* | N/A | N/A | N/A | N/A | N/A | N/A |
| 901393 | AMSTRAD | *Group MD* | A M Sugar | E | A M Sugar | E | A M Sugar | E |
| 901195 | ARCADIA GROUP | *Chair* | R M Halpern | E | J A Hoskyns | N | J A Hoskyns | N |
| 901195 | ARCADIA GROUP | *CEO* | R M Halpern | E | L Cooklin | E | J L Hoerner | E |
| 901195 | ARCADIA GROUP | *Group MD* | L Cooklin & P G Plant | E | N/A | N/A | N/A | N/A |

Based on this extract and according to the remarks made above, examples of management departures are W.O. Adamson (Chairman of Abbey National) who left in 1991; R. Kettle (CEO of Aggregate Industries) who left in 1990; D. Holder-Brown and R.G. Martin (Chairman and CEO of Allied Domecq respectively) who both left in 1990 and were treated as two different observations (see point c); and R.M. Halpern and P.G. Plant (Chairman/CEO and Joint Group MD of Arcadia Group respectively) who both left in 1990. Note that, Plant's departure was treated as one observation although L. Cooklin - the other joint MD- did not leave office (see point b).

In total there were 711 top management changes identified from the database. Each of the thesis chapters is based on a sub-section of the total sample of top management changes. Specifically, Chapters 4 and 6 refer only to the Most Senior Executive

departures (a total of 318 changes) whilst Chapter 5 includes only Chairman departures (a total of 309). The term Most Senior Executive is used to denote the top corporate position in each company, as the title "Chief Executive Officer" has only comparatively recently been used. The identification of the Most Senior Executive will be thoroughly discussed in Chapter 4. But in general, the Most Senior Executive for each company was taken to be the CEO if such role existed and if not the Executive Chairman or the Group MD.

#### *3.3.1.2 Classifying Top Management Changes*

The main research question addressed in Chapter 4 (which is extended in Chapter 5) is whether prior poor firm performance leads to a top management job separation. It is in those cases where the efficacy of internal governance institutions, such as the board of directors, is more pronounced (Fama and Jensen 1983). Moreover, forced termination of top manager's employment is more likely to be a response to poor management performance than are management changes in general. Consequently, the effectiveness of internal control mechanisms can be assessed by comparing forced departures with non-forced departures.

Unfortunately, as mentioned in Warner, Watts and Wruck (1988), Weisbach (1988) and Conyon (1998) the identification of forced departures can be very difficult because companies do not announce the true reason behind their managers' resignations. For example, a stated retirement may really be a forced departure. However, if a press report does indicate that a management change is forced (i.e. CEO was ousted by the boardroom) one can be reasonably confident that the change is indeed forced.

Therefore, in the majority of the cases the reasons for the departures stated by the companies were ignored in constructing the forced departure sample. Instead, all top management changes were cross-checked with the Financial Times (FT) Archive to get the exact date of the announcement of the change (ADATE), the leave date (LDATE), the reason for the departure as this was stated by the company and reported in the FT articles (RCHANGE), the circumstances of the change as discussed in the FT articles (CCHANGE), and the destination of the departing manager (DESTINATION). In addition to the FT Archive two other sources were also used to complement the data: a) UK Annual Financial News Summary (1989-1995) and b) company annual accounts.

This information was used to classify each turnover as either forced or non-forced using the following three-step decision process: Firstly, management departures for which it was possible to corroborate the cause independently were classified as either forced or non-forced. Therefore, changes because of the following reasons were deemed to be non-forced:

a) Normal succession: In this case top executives had to hand over their positions, in accordance with the mandatory policies of their company and irrespective of their age. A total of 27 departures were included in this category.

b) Death and Health/Illness: These departures were excluded from the forced category because they were totally verifiable. The sample consists of 15 departures due to death and 21 resignations due to illness.

c) Take-over/Merger/Demerger: Top management changes that occur at the same time as a transfer of a block of common shares (a control change) were also excluded from the forced departure sample. Most probably, these changes involved external rather than internal disciplining of the board and top management. A total of 24 changes occurred because of either take-over or merger and 6 because of a de-merger.

On the other hand, top management departures were classified as forced when the reported reason in the FT articles was:

a) Poor performance: a total of 57 departures in which poor performance was mentioned as the main cause in the FT articles.

b) Fired: interestingly enough only one company reported that it "sacked" its manager. This was Fisons, which ousted its CEO, Cedric Scroggs. Patric Egan, Chairman of Fisons, announced that "Cedric was offered the opportunity to resign, which he refused. He was, in effect sacked" (FT article, 14/12/93).

c) Policy or Personality disagreement: a total of 25 changes in the sample. The ousting of D. Pritchard, Managing Director of Takare is one such example. According to the FT articles "a ferocious boardroom row over management style at Takare ended last Friday afternoon when Mr Deverok Pritchard, one of the group's founders, was stripped of his executive duties... in a strongly worded statement Keith Bradshaw, Chairman, said the entire board had decided to terminate Mr Pritchard's position as managing director. The disagreement was not susceptible to any other solution" (FT

Article 15/3/94). Another example in this category is the departure of Lord Young of Graffham and James Ross, Chairman and CEO of Cable and Wireless respectively. In particular, " Lord Young of Graffham and James Ross left the company yesterday after two days of crisis talks failed to resolve a rancorous power struggle between the two men...the decision to ask both men to leave brings to an end an episode which many believe is both bizarre and unprecedented in the history of UK public companies" (FT Article, 22/11/95).

d) Scandal: There were 14 cases in which top managers were forced to resign because of actions/decisions taken by them and regarded beyond accepted "ethical standards". Moreover, these actions were very much related to the firm's activities. A striking example in this case is Maxwell Communications whose entire top management team (i.e. Ian Maxwell, Kevin Maxwell and Charles Maxwell) was arrested in July 1992 following frauding and money abuse; the company itself went into receivership. Moreover, Shay McKeown (CEO of Powerscreen) was forced to resign in March 1998 due to a number of "irregularities" discovered by the board, such as internal control problems, pricing problems with Matbo (one of the company's subsidiaries), and accounting policy inconsistencies. Finally, another scandal example is that of Mick Newmarch (CEO of Prudential) who resigned abruptly in January 1995 following an investigation on his share dealings in Prudential shares by the Stock Exchange.

In all the above types of departures (both forced and non-forced) there were no inconsistencies between company announcements and press releases eliminating thus any doubt about the true reason for the job separation.

Secondly, departures were grouped as forced if information in the FT articles appeared consistent with a forced turnover. If not, the departure was grouped as non-forced. Hence:

a) In the sample there were 27 cases in which top managers took a position in another firm. The 26 instances of top managers taking prestigious positions elsewhere may be considered verifiable and hence were excluded from the forced departure sample. The only case that can be regarded as a non-voluntary one was the departure of T. Lea, Joint MD in Minorco, who went to the headquarters of the parent company. Although there were no explicit comments on the company's economic health, articles mention that "cost-cutting was under way...this includes the consequent streamlining of Minorco's cumbersome US management structure... There has also been a wider management shake-up at Minorco that effectively had 3 MDs" (FT Article, 3/2/93).

b) A total of 26 management changes took place because executives assumed another position in the firm. In 20 cases managers were actually promoted to better positions (i.e. from CEO to vice-chairman or deputy chairman) and therefore these cases were excluded from the forced departure sample. However, in 6 instances the assumption of another position in the firm implied a forced departure. These were:

- L. Lewis, CEO of Blenheim Group, became deputy chairman; 3 months later he resigned entirely from the company.
- Roddick, CEO of the Body Shop company, became co-chairman and a new CEO was appointed. According to the FT articles, "the new post was one of a

series of shake-ups as the company sought to recover from several years of stagnate performance" (FT Article, 13/5/98).

- At the same time and for the same reasons, S. Rose, MD of the Body Shop company, became deputy chairman.
- P. Hedges and W. Hogbin, Joint Managing Directors (JMD) of Taylor Woodrow, were both stripped from the JMD title following the appointment of a new Chairman who replaced the previous one because of poor performance. As a result, they became divisional managers. Furthermore, in September 1992 - shortly after the changes - Hedges resigned entirely from the company.
- J. Prosser, CEO of Proudfoot, went to his old post (MD of Europe Operations) as part of the restructuring and rationalisation measures of the group, which was financially struggling. In April 1995, 6 months later, he left the company, as did the Chairman.

c) In total, 24 top managers left their position because of personal reasons or other interests. Out of these, 10 changes were categorised as forced and 14 as non-forced. Departures under the heading "personal reasons/other interests" were classed as forced resignations because FT articles included implicit or explicit comments on poor firm performance, conflict between the departuree and the directors or other stakeholders ("he is understood to have had a rocky relationship with the company's directors"), investors' dissatisfaction (e.g. "he has come under increasing criticism recently from analysts...it has been suggested that he is under heavy fire from big institutions") etc. In contrast, non-forced changes due to personal reasons or other interests took place under a lot more amicable circumstances. The following two examples will help illustrate the above points: D. Simon, Chairman of BP resigned

following his appointment as minister of the Labour government whereas J. Conlan, CEO of First Leisure was pushed to step down by the board directors, who were dissatisfied by his performance.

d) In 32 managerial changes there was no clearly stated reason by the company. In all 32 cases, there were explicit or implicit comments by the FT about the firm's poor performance and rumours on managerial conflict and/or pressure by institutional investors or the boardroom; in addition, some of the changes were characterised by the press as "surprised, unexpected" departures. As a result, and similarly to previous studies (see Weisbach 1988), they were all included in the forced sample.

e) A remaining of 45 departures took place because of other various reasons. A total of 21 changes were deemed to be forced and 24 non-forced. Examples of the latter type of changes were:

- Departures from temporary positions: e.g. M. Thorne was designated temporary Chairman of Brunel Co. until a permanent replacement would be found.
- Departures due to the accomplishment of a particular task: e.g. D. Kendall took over as Chairman of Bunzl in November 1990 in order to help the company during a very difficult period; he resigned upon the completion of his duties.

Examples of forced departures under the category "other reasons" were changes mainly because of managerial conflict, firm poor performance, and desire of the City/investors for a new management team/structure. In most cases, however, the real reason of the departure was disguised by the company. For example, P. Scott- Chairman and CEO of

Aegis group- was ousted by the board due to poor performance; the official reason for his resignation was that the company moved its headquarters to Paris!

The third step of this study's classification strategy was the investigation of the retirements. In contrast with previous studies that regard all retirements as routine departures, this study performed a detailed analysis of this type of change as well and this is another unique feature of the current thesis. In total, there were 321 top managers retiring, out of which 278 left entirely the firm, 38 remained as non-executive directors and 5 continued as part-time consultants. In very few cases, the departing chairman became honorary/emeritus president of the group.

One variable that is highly correlated with the probability of a planned retirement is the age of the departing manager. As already mentioned, Chapters 4 and 6 are based on a sample that consists of the Most Senior Executive departures. Chapter 5, on the other hand, refers to the Chairman departures. Accordingly, the mean age of individuals described as retiring is 63 in the case of the Most Senior Executives and 64 in the case of Chairmen. The Chairman post can be either executive or non-executive. Furthermore, non-executive directors tend to retire later; most of them work part-time and in general there are no formal retirement policies for them. As a result, the mean retiring age of the Chairman positions is slightly higher than that of the Most Senior Executive positions, which are always executive. Departees not described as retiring were generally younger; their mean age is 55.4. Moreover, the p value of the t-statistic for the difference in mean ages of retirees and other departees was 0.00, indicating its statistical significance.

Consequently, all retiring managers with ages including and above 63 or 64 years old (depending on the sample) should be excluded from the forced sample while all retiring managers with ages below 63 or 64 should be included in the forced sample. However, the classification of retirements into forced and non-forced based on the age variable and only could lead to wrong conclusions; e.g. include in the sample of non-forced departures a retirement that was "voluntary", based on the age criterion, but forced according to the rest of the information. In other words, the term retirement could be a euphemism for a forced departure.

For this reason, each retirement case was separately analysed taking under consideration a number of facts (apart from the age of the departing manager). These were:

a) The circumstances of the change: Similarly to the rest of the departures, a retirement in which there were no implicit or explicit comments in FT articles on any type of conflict or dissatisfaction, is more likely to be an amicable and friendly departure.
b) The destination of departing manager: A retirement in which the person continued in the firm, instead of leaving entirely the group, is more likely to have occurred under amicable circumstances.
c) The time period between the announcement and the leave date: A relative short period between the two dates, in contrast with a "relay process" in which the successor has been identified several years before the CEO departs, would imply a less amicable retirement.

The following two examples illustrate the above points:

a) C. Stein, Chairman and MD of Hilton group, retired at the age of 65. Based on the age criterion and only (i.e. including and above 63 years old), this should be a non-

forced retirement. However, FT articles make it very explicit that C. Stein was forced to retire, following the *investors' dissatisfaction* with the company's performance. In addition his retirement was announced in September 1993, *only 3 months before he entirely left the group.*

b) P. Dodd, CEO of Alliance Unichem, retired at the age of 55. Again, this should be a forced departure. However, FT articles reveal that this was actually a voluntary and very amicable retirement. Overall, 31 of the retirements were classified as forced and 290 as non-forced.

Finally, it should be noted that there were 35 cases for which information provided was limited. These departures were classed as forced or non-forced based on a number of pieces of information including the destination of the departing manager, the age of the departing manager etc. Consequently, 15 of these changes were classified as non-forced and the remaining 20 as forced. Since there is a fairly high possibility of misclassification, the sensitivity of the results was investigated excluding these observations. This will be further discussed in both Chapters 4 and 5.

The above sample construction resulted in 218 forced departures and 482 non-forced ones (a total of 700 observations) from 460 UK listed companies over the period 1990-1998. There were 11 cases for which no information was found and hence, were excluded from the construction of the forced and non-forced samples. Given that executive dismissals are a relatively rare corporate event (Furtado and Karan 1990), the low incidence of forced departures in the sample could be interpreted as evidence of proper classification of total changes. The classification process of top management departures is summarised in Table 3.4, which presents the reasons given by companies

for the job separation as well as the number of forced and non-forced top executive departures by reason.

**Table 3.4: Forced and Non-Forced Top Management Changes by Stated Reason as Reported in the Financial Times, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Reasons | Forced Changes | Non-Forced Changes | Total |
|---|---|---|---|
| Retired and left board | 29 | 254 | 283 |
| Retired and stayed on board | 2 | 36 | 38 |
| Normal succession | 0 | 27 | 27 |
| Death | 0 | 15 | 15 |
| Health/Illness | 0 | 21 | 21 |
| Policy/Personality disagreement | 25 | 0 | 25 |
| Poor performance | 57 | 0 | 57 |
| Personal reasons/Other interests | 10 | 14 | 24 |
| Take position in another firm | 1 | 26 | 27 |
| Fired | 1 | 0 | 1 |
| Assume other position in firm | 6 | 20 | 26 |
| Take-over/Merger | 0 | 24 | 24 |
| De-merger | 0 | 6 | 6 |
| Scandal | 14 | 0 | 14 |
| Other | 21 | 24 | 45 |
| No clear reason reported | 32 | 0 | 32 |
| Limited Information | 20 | 15 | 35 |
| **Total** | **218** | **482** | **700** |

As indicated above, the most commonly reported reason for executive departures as well as the majority of the non-forced departures is retirements (46% and 60% respectively). An interesting observation is that - as expected – companies are reluctant to disclose full information regarding the departure of their managers. Instead they opt to provide standard expressions such as "personal reasons", "other interests", or generally other reasons. Accordingly, in this study almost half of the total departures under the heading "personal reasons/other interests" and "other" were classed as forced

changes (approximately 42% and 47% respectively). Table 3.5 provides information on the destination of the departing executives.

**Table 3.5: Destination of Departing Top Managers, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Destination of Departing Manager | Number of Managers |
|---|---|
| Left firm[12] | 558 |
| Remained non-executive director | 113 |
| Remained other employee | 14 |
| N/A[13] | 15 |
| **Total** | **700** |

As shown, the majority of the managers leave entirely the firm after departing from their office (almost 80%). Another 16% continues with the firm on a non-executive role whilst only 2% of the departing executives continue to provide their services to the company mainly as part-time consultants.

In order to test the agency predictions, the analysis in Chapters 4 and 5 classifies top executive departures into forced and non-forced. Chapter 6, on the other hand, uses a slightly different grouping of departures. More specifically, under this chapter executive changes are grouped into two main categories: a) forced departures, and b) planned departures. Whilst the reason for the above type of departure classification will be thoroughly explained in Chapter 6, I shall briefly outline the basic rational. In particular, Chapter 6 investigates two types of managerial opportunistic behaviour associated with executive departures namely, the "horizon" and the "cover-up" phenomena. Moreover, various authors argue that the former is generally predicted to be more evident under

[12] In very few cases, the departing manager (most often chairman) becomes honorary/emeritus president of the group, but this is not an executive post.
[13] N/A applies in those cases where the reason reported is death.

planned departures whereas the second one is expected to be more severe under forced changes (e.g. Dechow and Sloan 1991). Hence, the above classification methodology.

The composition of the forced sample has just been discussed. The term planned departures is used to denote those changes that were pre-determined and anticipated by the executives. Consequently, planned departures consist of executive retirements and normal successions. Moreover, retirements that were triggered by a number of other hidden reasons (e.g. conflict or dissatisfaction) instead of being orderly and normal departures should not be included in the sample of planned changes. As already mentioned, these retirements could be a euphemism for a forced departure and were, therefore, excluded from the sample of planned executive departures. Of course, departures because of other reasons (e.g. take a position in another firm) may also entail some element of anticipation. But as various authors argue, studies that identify situation-specific factors under which discretionary managerial behaviour is predicted to be particularly strong, are powerful tests of earnings management strategies (e.g. Pourciau 1993; Healey and Wahlen 1999). Since retirements and normal successions are the most expected type of departure and according to the above, the sample of planned changes includes only these two turnover events.

#### *3.3.1.3 Stock Ownership*

Information on the equity position of top managers was collected as follows:

a) The number of ordinary shares (ORDINARY) as well as the number of option holdings (INCENTIVE) of each company's Chief Executive Officer, Chairman, and Managing Director were manually recorded from the September issues of the PWC

Corporate Register (Companies Section). This procedure was repeated for each edition of PWC Register from 1990 to 1998.

b) Information on top managers' equity was supplemented through other issues of the PWC Corporate Register and company accounts.

#### *3.3.1.4 Birth Dates*

The birth dates (MBD) of the sample's top managers were mainly collected through three sources: a) various issues of the PWC Corporate Register (Directors' and Officers' Section), b) the Directory of Directors (1999), and c) the Companies House in Birmingham.

#### *3.3.1.5 Appointment Dates*

The appointment dates (APPOINTMENT) of each company's CEO, Chairman, and Managing Director at the particular position were recorded from the September Issue of PWC Corporate Register (Directors' and Officers' Section). This procedure was repeated for each September edition of PWC Register from 1990 to 1998. In many cases, however, information was not available. A number of sources were used to gather the missing appointment dates. These are:

a) Management profiles of various companies, available in the September as well as other PWC Corporate Register, provided information on executives' appointment dates.

b) Extel Financial UK Quoted Companies – Annual Cards.

c) Company accounts provided by LASER D.

d) Financial Times Archive, and

e) Mail survey: in the cases where companies still existed a letter was sent to them requesting the appointment dates of their executives, followed up by a phone call or fax. Out of 103 companies a total of 81 (78.6% response rate) replied, providing thus 116 additional appointment dates.

Tables 3.6, 3.7 and 3.8 report further descriptive information regarding the stock-based compensation, the age and the tenure of top executives in the UK. Stock-based compensation provides a direct link between shareholder wealth and CEO wealth, because each pound increase in the stock price increases the value of ordinary shares, stock options etc. Accordingly, it is widely argued by agency scholars that stock-based compensation can provide financial incentives for managers to take actions to increase shareholder wealth, and to avoid actions that decrease shareholder wealth (Jensen and Murphy 1990; Murphy 1999; Conyon and Murphy 2000a). Table 3.6 shows that the leading executive of a UK company (i.e. Most Senior Executive) has both higher ordinary and option holdings than the other top executives (2.37% and 0.24% as opposed to 1.55% and 0% respectively). Bearing in mind that organisational theorists (e.g. Glover 1976; Hofer 1980; Steiner, Miner and Gray 1982) have largely agreed that CEOs are the principal individuals responsible for the company's economic status, the above finding is in line with the argument of tying CEO compensation to stock price.

Moreover, as indicated the leading executives in UK companies are also younger compared to the other top managers. The average age of a leading executive is approximately 53 whilst non-Most Senior Executives are about 58 years old; the p value of the t-statistic for the difference in mean stock-based compensation and age of MSE and non-MSE is 0.00, indicating its statistical significance. Finally, data reveal that on average both the Most Senior Executives and the other non-MSE executives serve in office for about 5 years.

**Table 3.6: MSE and Non-MSE Stock-Based Compensation, Age and Tenure, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Average | MSE | Non-MSE | p-value |
|---|---|---|---|
| Ordinary Holdings (% of Common) | 2.37% | 1.55% | 0.000 |
| Option Holdings (% of Common) | 0.24% | 0.00% | 0.000 |
| Age | 53.6 | 57.9 | 0.000 |
| Tenure | 5.42 | 5.37 | 0.758 |

Table 3.7 presents some time-series data on the stock-based compensation of the leading executives. It reports that ordinary MSE holdings (as a % of common equity) have declined from 3.25% in 1990 to 1.20% in 1998. Moreover, the fraction of option holdings owned by the company leading executive in 1994 was two times as much as that in 1990 whilst in 1998 it fell by 26% (when compared with 1994). This evidence is consistent with the findings of Main (1999) who - based on data provided by a large compensation consulting firm - demonstrates that the prevalence of option schemes in the UK grew dramatically from the mid-1980s to the early 1990s to fall again in the mid-1990s. In particular, in 1978 only 10% of UK companies offered options to their top executives, by 1983 over 30% of companies had established option schemes, and by 1986 this figure had increased to almost 100%. However, the use of share options in the

UK fell substantially in the mid-1990s whilst by 1997 only 68% of companies were in a position to offer options to their top executives[14].

**Table 3.7: Most Senior Executive Stock-Based Compensation by Year, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Year | Ordinary Holdings (% of Common) | Option Holdings (% of Common) |
|---|---|---|
| 1990 | 3.25% | 0.16% |
| 1991 | 3.15% | 0.16% |
| 1992 | 2.74% | 0.19% |
| 1993 | 2.43% | 0.30% |
| 1994 | 2.38% | 0.34% |
| 1995 | 2.00% | 0.19% |
| 1996 | 2.37% | 0.40% |
| 1997 | 1.77% | 0.21% |
| 1998 | 1.20% | 0.25% |

Finally, Table 3.8 depicts the fraction of stock-based compensation, the age and the tenure of *all* UK senior managers by industry sector.

**Table 3.8: Top Management Stock-Based Compensation, Age and Tenure by Industry Sector, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Industry Sector | Ordinary Holdings (% of Common) | Option Holdings (% of Common) | Age | Tenure |
|---|---|---|---|---|
| Mineral Extraction | 1.19% | 0.12% | 54.9 | 4.05 |
| General Manufacturers | 2.11% | 0.20% | 56.3 | 5.80 |
| Consumer Goods | 1.80% | 0.17% | 55.2 | 4.48 |
| Services | 2.84% | 0.16% | 55.2 | 5.89 |
| Utilities | 0.20% | 0.00% | 56.8 | 2.83 |
| Financials | 1.14% | 0.18% | 56.0 | 6.07 |

[14] It should be noted that the reduction in managerial option holdings does not necessarily imply a reduction in the proportion of equity in management remuneration. Instead, it reflects remuneration recommendations proposed by the Greenbury report (1995), according to which traditional option schemes be shifted out into other kinds of long-term incentive schemes (LTIPs).

A couple of interesting observations are derived from this table. Firstly, the utilities sector has the oldest top managers with the least tenure in office and the lowest fraction of stock-based compensation (both ordinary and option holdings). The latter finding is consistent with that of Conyon and Murphy (2000b) who, based on a sample of the largest UK companies in 1997, report that the proportion of share holdings and option holdings (as a % of common equity) for utilities is 0.01% and 0.03% respectively and the lowest compared with the rest industry sectors. Taken together, this evidence confirms Smith and Watts (1982) who argue that stock-based compensation is predicted to be less prevalent in regulated industries (i.e. industries where it is more difficult to alter the risk of investment).

Secondly, general manufacturers have the highest top managerial option holdings and the second highest top managerial ordinary holding (0.20% and 2.11% respectively). This is in line with a stream of literature, which reports that high-growth firms (e.g. chemicals, electrical equipment etc.) have a significantly higher incidence of stock-based compensation and in particular, of stock option plans (Smith and Watts 1992; Gaver and Gaver 1993; Collins, Blackwell and Sinkey 1995; and Baber, Janakiraman, Kang 1996).

#### *3.3.1.6 Type of Succession*

One of the explanatory variables of Chapter 5 is the type of managerial succession (SUCCESSION). That is whether the new Most Senior Executive is an insider as opposed to an outside candidate. For this reason, detailed information regarding the career paths of the new Most Senior Executives was collected mainly through: a) the September issues of the PWC Corporate Register (Directors' and Officers' Section), and

b) FT articles. In many cases, however, data was supplemented by UK Annual Financial News Summary (1989-1995) and Extel Financial UK Quoted Companies – Annual Cards. Full descriptive data on the types of managerial succession will be presented in Chapter 5.

To summarise this section, it is important to emphasise that the collection of all the above management specific variables has resulted in the construction of a unique data set drawn on the top 460 UK listed companies during almost an entire decade (i.e. 1990-1998). It is the quality and quantity of this data that has enabled the current study to advance prior empirical work on executive turnover and make substantial contributions to the related literatures.

Having described the collection and construction process of the directors' variables this chapter will now continue with a brief discussion of the company specific variables collected for the current study.

### *3.3.2 Company Specific Variables*

With the company name (COMPANY) and initial market value (MV) established through the creation of the sample, the next variable collected was the company's Datastream code (DSCODE), used as a unique reference number for each company thereafter. The 3-digit (ICODE-3) and 1-digit (ICODE-1) industrial classification codes and industry description (ITYPE) were then recorded based on the company's entry in the PWC Corporate Register in September, 1995. Table 3.9 shows the distribution of the sample companies over the six main industrial groupings. The majority of the companies are either service companies or general manufacturing companies, with these

two sectors alone accounting for approximately 59% of the sample. Note that no investment trusts are included in the sample.

**Table 3.9: Number of Companies by Industry Sector Group, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Industry Sector | 1-digit Industry Code | Number of Companies |
|---|---|---|
| Mineral Extraction | 1 | 18 |
| General Manufacturers | 2 | 140 |
| Consumer Goods | 3 | 56 |
| Services | 4 | 130 |
| Utilities | 6 | 44 |
| Financials | 7 | 72 |
| **Total** | | **460** |

Next, the total number of ordinary shares in issue (EQUITY) of each company for each year over the period 1990-1998 was manually recorded from the September issues of the PWC Corporate Register (Companies Section). Similarly to top managers' equity, information regarding the company's share capital was supplemented through other issues of the PWC Corporate Register and company accounts.

The rest of the company variables were collected from Datastream. Some of them were used in order to construct certain metrics applied in the current thesis. The construction of these metrics was another demanding and very important task of this thesis. As mentioned, for ease of exposition, the description of this task will be fully discussed in the chapters in which the variables were used. Instead, the current section provides a full explanation of these variables.

Accordingly, the return index (RI) was collected on the 1st January of each year for each company in order to compute an annual log shareholder return figure. A company's

return index shows the growth in the share value and the value of the dividends. The relevant formula is:

$$RI_t = RI_{t-1} * \left( \frac{P_t + D_t}{P_{t-1}} \right)$$

where $P_t$ = price on ex-date (i.e. the day dividend payments become certain), $P_{t-1}$ = price on previous day and $D_t$ = dividend payment associated with ex-date t.

Moreover, the unadjusted share price (UP) for each company on the 1st January of each year was selected in order to calculate the value of ordinary stock holdings owned by executives. This is the closing price, which has not been historically adjusted for bonus and rights issues. This figure, therefore, represents actual or raw prices as recorded on the day.

The rest of the company specific variables are company accounts variables. For each of them a full explanation along with the Datastream item number is given. The variables include:

- Earnings before interest and tax (EBIT-Datastream item 1300): this is calculated by taking the pre-tax income and adding back only the total interest expense on debt.
- Total assets employed (ASSETS-Datastream item 391): it is defined as the sum of tangible fixed assets, intangible assets, investments, other assets, total stocks and work in progress, total debtors and equivalent, cash and cash equivalents, minus current liabilities.

- Total new fixed assets (INVESTMENT-Datastream items 435 & 1024)[15]: this is the total of fixed assets purchased, including assets from subsidiaries acquired.
- Depreciation (DEPRECIATION-Datastream item 136): this includes provision for amounts written off, and depreciation of tangible fixed assets.
- Operating profit –Adjusted (OPROFITA-Datastream item 137): this is net profit derived from normal activities of the company after depreciation and operating provisions. Adjustments include items of an exceptional nature, which do not form part of the company's normal trading activities.
- Total sales (SALES-Datastream item 104): the amount of sales of good and services to third parties relating to the normal industrial activities of the company.
- Total loan capital (DEBT-Datastream item 321): this represents the total loan capital repayable after one-year. It includes debentures, bonds, convertibles, and "debt like" hybrid financial instruments.
- Total plant and machinery - gross (GVP-Datastream item 328): this relates to the gross book value of plant, machinery, motor vehicles, equipment, furniture, fittings etc.
- Total land and buildings - gross (GVB-Datastream item 327): the gross book value of all plant and machinery (i.e. freehold, leasehold etc.)
- Total plant and machinery - net (NVP-Datastream item 699): this shows total plant and machinery, net of depreciation.
- Total land and buildings - net (NVB-Datastream item 698): this shows total land and buildings, net of depreciation.

[15] In 1992, there was a Datastream code change for total new fixed assets from 435 to 1024.

Finally, there were two variables that are neither company specific nor executive specific. These include the total UK capital stock in current prices (CSCP) and the total UK capital stock in 1995 prices (CS95). Both of these variables were used in Chapter 6 in order to construct the net capital stock at replacement cost and were collected by contacting directly the office for National Statistics in London.

## 3.4 Concluding Remarks

This chapter has detailed the construction of the study's data set. As highlighted in the above sections, the variable collection process was particularly labour-intensive and time-consuming. It enabled, however, the advancement of prior literature in three main ways. Firstly, it resulted in the construction of a comprehensive and unique data set on the composition of the top management teams, drawn on the top 460 UK listed companies by market capitalisation over the period 1990-1998. This in turn has two valuable implications: a) it allowed a more precise identification of the company's leading executive than before, and b) it enabled – for the first time in the UK - the modelling of Chairman turnover. Both of the above are substantial contributions to the mapping of senior management departures in the UK.

Secondly, it generated a number of enlightening information regarding important characteristics of the UK top management teams (e.g. the existence of combined titles, stock-based compensation etc.) The availability of panel data, in particular, enabled the description of trends and developments in UK top management teams. Finally, due to the quality of the data, this thesis was able to appropriately classify executive departures in order to perform strong tests of the hypotheses under investigation. Accordingly, the thesis was able to use a) a much less noisy measure of forced departures (Chapters 4, 5

and 6), and b) a much more accurate measure of planned departures (Chapter 6) than previous studies[16]. The classification strategy itself is a key issue in executive turnover studies.

The structure of the data set as well as the quality of the data also made it possible to accurately match the timing of management departures with the appropriate firm performance metrics. That is of particular importance in this study. Management changes, as explained above, were identified by comparing the composition of top management teams across years. The annual period, however, is not a calendar year, but instead September to September. This is because the primary data source (i.e. the PWC Corporate Register) was only published semi-annually in pre-1994 and thus an analysis by calendar year was not possible. That means, that each annual period overlaps two different calendar years.

Therefore, a director who was in the top management team in September 1993, but not in September 1994, may have left in either the calendar year 1993 or 1994. In order to examine whether prior year's performance has led to the turnover of this manager one would need the exact leave date (i.e. if he/she left in 1993 then prior year's performance refers to 1992 whilst if he/she left in 1994 prior year's performance refers to 1993). Therefore, as mentioned, an additional variable (i.e. the actual date of the departure) was collected to further improve the accuracy and consistency of the data. Consequently, the current analysis was able to locate the actual date of the turnover event and match it against the appropriate annual performance measure.

[16] It should be noted that despite every effort a small level of noise in the forced departure variable is unavoidable.

Though comprehensive, the data set is not without its weaknesses. Although as detailed above, every effort was made to match the timing events, at times it does remain an approximation. The main limitation thus, stems from the inability to precisely identify the financial year end date of the sample companies. Datastream does not directly provide this information whilst the annual reports for a major part of the sampled firms – especially during the early years – were not readily available. Consequently, the current study assumes that the majority of the companies have a December end year whilst a smaller fraction has a March end year. However, the error is not likely to be significant. Drawn on a sample of 510 UK quoted companies in 1997, Sadler (1999) shows that 47% of the companies have a December year end with a further 20% having a year end of March.

Bearing in mind that there is a lag period between the date companies produce their annual reports and the date Datastream receives and disseminates this information, all accounting variables used in this study (e.g. EBIT, depreciation etc.) were collected as in August of each year. Hence, for the majority of the sample firms with a December year end all variables (i.e. the turnover event, shareholder returns and accounting variables) were perfectly matched whilst for those companies with a March end year there is a three-month lag only in the accounting variables. The timing of the variables remains an issue for only those companies that have an end year other than December or March, such as June or February. But as these companies are very likely to account for about one quarter of the entire sample, the error is expected to be only minor.

Up to now Chapters 2 and 3 have prepared the reader for the empirical part of the current thesis by discussing the general conceptual background of the analysis,

reviewing prior empirical work, explaining the construction of the data set, and drawing the profile of UK top management teams. The main analysis starts with the following chapter, which empirically explores the association between top management changes and firm performance as well as the circumstances under which poor performance can lead to a top management job separation.

# CHAPTER 4

# Most Senior Executive Turnover, Firm Performance and Stock Ownership

## 4.1 Introduction

This chapter investigates the quality of the monitoring of internal governance systems (e.g. the board of directors) as expressed in their willingness to replace the senior management team in response to poor corporate performance. That is it focuses on the efficacy of internal control mechanisms within UK companies with respect to the top executive dismissal function. Consequently, it addresses a central corporate governance question: are changes in top management associated with poor company performance? This problem has, of course, been addressed before in the literature and the general empirical conclusion is that a negative association exists between CEO turnover and performance. CEOs are fired for declining stock prices and accounting returns (see the review by Murphy 1999). In the US Coughlan and Schmidt (1985) and Warner, Watts and Wruck (1988) document an inverse relationship between the probability of management turnover and firm performance. Recently, in the UK Conyon (1998), Dedman (2000) and Dahya et al. (2001) also document a negative CEO turnover – corporate performance relation.

The contribution of this chapter is fourfold. Firstly, the CEO turnover and firm performance relation is documented for a panel of hand collected UK data between

1990 and 1998. The existing UK evidence relating to CEO turnover and performance is comparatively sparse. It typically relates to only a few years (Franks et al. 1996), or relies on survey-based data (Conyon 1998), or focuses on specific industries (Cosh and Hughes 1997). Moreover, the majority of past studies does not perform an inclusive and comprehensive identification and classification of top executive departures (Dedman 2000; Dahya et al. 2001). In contrast, the quantity of this study's data increases significantly the power of the tests. More importantly, the quality of the recently hand collected governance data enables, for the first time, to map a higher frequency of changes in the UK top management teams between 1990 and 1998, as well as to focus on differences in management change based upon forced and non-forced CEO departures.

Secondly, this chapter addresses the time series heterogeneity of the CEO turnover and firm performance relation. This is unique to the UK literature. There have been many claims that in the presence of global product market competition investors and boards are expecting increasingly superior top management performance. These claims are investigated by evaluating whether top executives are more likely to be fired for poor performance today compared with the earlier years.

Thirdly, the analysis explores how bad firm performance really has to be before top executives are replaced. Typically, the literature estimates a single (negative) parameter that acts as supporting evidence that CEOs are replaced for poor performance. However, this study evaluates whether doing really badly (stock returns in the low deciles – e.g. $10^{th}$) has different effects on executive turnover compared to doing really

well (stock returns in the high deciles – e.g. $90^{th}$). This is also unique to the UK literature.

Finally, the current chapter provides additional evidence on a controversial issue related to the turnover-performance relation, that is the impact of managerial shareholdings on the internal monitoring efforts. It is sometimes argued that the when the CEO is an important equity holder in the company, then he or she can become potentially entrenched, and his or her shareholdings may prove a stumbling block to those who wish to hasten departure for poor performance (Morck et al. 1988). The existing evidence relating to the role of equity in the turnover-performance relation is both sparse and mixed.

Whilst this study was based on the top 460 UK companies over the period 1990-1998 (as described in Chapter 3), its focus is the turnover of the leading executive, known as the Most Senior Executive. Since the main focus is on the relationship between the likelihood of MSE turnover for poor performance, it is important that a number of performance metrics in the modelling procedure are adopted. Accordingly, firm performance was measured in a number of ways including absolute total shareholder returns, accounting earnings as well as industry-adjusted shareholder returns and accounting earnings. Managerial stock ownership was measured by the fraction of ordinary shares owned by the company's top manager.

The analysis yields four substantive results. Firstly, it documents an inverse and robust relation between the probability of a top management change and a firm's performance: MSEs are fired for poor performance. Secondly, Most Senior Executives are more likely

to leave their office today than in the past, but the correlation between MSE dismissal and company performance has not changed markedly over this time period. Thirdly, empirical results indicate that performance has to fall dramatically for MSEs to be dismissed. Finally, there is little evidence of managerial entrenchment at high levels of managerial stock ownership.

The remainder of this chapter is organised as follows. Section 4.2 discusses the motivation of this study and develops the main hypotheses under investigation. Section 4.3 provides a very brief summary of prior empirical work and explains how this study contributes to the executive turnover literature. Details on the data construction and the estimation strategy are given in Section 4.4. Findings are presented and interpreted in section 4.5. Section 4.6 examines the sensitivity of the results whilst finally, Section 4.7 offers some concluding remarks.

## 4.2 Motivation and Hypotheses Development

This section discusses the chapter's theoretical origin, which in turn results in the development of the two main research hypotheses. These include: a) the "*poor-performance" hypothesis* considered in Section 4.2.1, and b) the "*entrenchment" hypothesis* discussed in Section 4.2.2.

### *4.2.1 Internal Monitoring Mechanisms*

Agency scholars have shown a growing interest in the mechanisms by which executives are monitored and disciplined. These mechanisms include: a) the managerial labour market (Fama 1980); b) product market competition (Alchian 1950; Stigler 1958; Hart 1983); c) capital market competition (Jensen 1991); d) the market for corporate control

(Manne 1965; Fama and Jensen 1983) and; e) internal control mechanisms (Fama 1980; Demsetz 1983a, 1983b). The current chapter provides indirect evidence on the efficacy of internal governance mechanisms the most important of which are the directors' board, the firm's managers, and large shareholders.

Board monitoring effectiveness may manifest itself in managerial hiring and firing decisions. As Fama (1980, p.294) argues "the board is viewed as a market-induced institution, the ultimate internal monitor of the set of contracts called a firm, whose most important role is to scrutinise the highest decision makers within the firm". This does not necessarily rule out the evolution of other, more efficient monitors of top management. The critical point, however, is that in a competitive environment lower-cost sets of monitoring mechanisms are likely to survive. As Fama (1980) emphasises the directors' board can be not only an efficient monitoring internal device for replacing and reordering top management, but also a relatively low-cost one when compared with other mechanisms, such as outside take-over. Moreover, Fama and Jensen (1983) maintain that the board can serve as an important institution to resolve the manager-shareholder agency problem, as long as certain conditions are met (e.g. individual top managers, especially those who are members of the board, have limited decision discretion).

However, the board may not always carry out its monitoring and disciplining duties successfully, since the degree to which these are performed depends on a number of factors, some of which may be contradictory. On one hand, it is widely argued that directors' incentives to monitor top management are constantly increasing. There are several reasons behind this argument. Firstly, directors have certain legal obligations to

the shareholders and they can be held liable for damages if they fail to meet these obligations (Ricardo-Campbell 1983). Secondly, their control via corporate accountability has been increasing, as they have the power to assess the efficiency of internal auditing and to influence the appointment and/or replacement of independent auditors (Ricardo-Campbell 1983)[17]. Thirdly, directors - who tend to be major decision-makers at other organisations - have incentives to signal to the labour market that: a) they are decision experts, b) they understand the importance of diffuse and separate decision control, and c) they can work with such decision control systems. That is, directors increase the value of their human capital, which depends primarily on their performance as internal decision managers in other organisations, by strengthening their reputations as decision control experts (Fama 1980; Fama and Jensen 1983).

Contrary to the argument that directors' incentives are aligned with those of shareholders and can thus be good monitors of management, several board and in particular, outside director characteristics suggest that directors will not necessarily act in shareholder interests. First, outside directors may owe their positions to management, who proposed them in the first place (Hart 1995). Second, interlocking and multiple directorships may reduce the effectiveness of outside directors (Patton and Baker 1987; Hart 1995). If they are spending a lot of time on boards generally but not spending a lot of time on any *one* board, it is very doubtful they are able to assess realistically the performance of so many managers in so many different industries. Third, information problems may impede the effectiveness of outside directors in their task of evaluating managerial performance. As Jensen (1993, p.864.) comments, "the CEO almost always determines the agenda and the information given to the board. This limitation on

[17] This is not to say that directors have formal control. Instead, the ultimate decision regarding the auditors' appointment is taken by the shareholders at the AGM and not by the directors.

information severely hinders the ability of even highly talented board members to contribute effectively to the monitoring and evaluating of the CEO and the company's strategy". Fourth, directors may not own a substantial fraction of the company equity and therefore, may have little to gain personally from improvements in company performance (Jensen 1993; Hart 1995). Finally, a boardroom culture that eschews frankness in favour of politeness and courtesy may be a proximate cause in the failure of the corporate control mechanism (Patton and Baker 1987; Jensen 1993).

A second internal control device is mutual monitoring among the firm's managers (Fama 1980; Fama and Jensen 1983). Within the "property rights" perspective – discussed in Section 2.2.1 - the firm is viewed as a team whose members act from self-interest but realise that their destinies depend to some extend on the survival of the team in its competition with other teams. In short, as Fama (1980, p.293) summarises "each manager has a stake in the performance of the managers above and below him and, as a consequence, undertakes some amount of monitoring in both directions".

Fama (1980), presents a number of reasons why managers have incentives to monitor each other. Firstly, when managers interact to produce outputs they acquire low-cost information about colleagues that can be used in order to step over shirking or less competent managers above them; in this case competition among the firm's managers serves as an internal source of checks. Secondly, managers are aware that their marginal product and hence, their compensation is a positive function of the performance of the entire team. Finally, managers realise that the overall performance of the firm is likely to be used by the managerial labour market as a measure to determine their outside opportunity wage.

Finally, shareholder concentration can be a very important internal disciplining device. When company ownership is diverse then a potential for a sub-optimal level of monitoring exists, since an individual shareholder is unable to fully appropriate the gains from the monitoring function. Monitoring activity, in this case, has the characteristics of a public good; if an individual shareholder carries out the monitoring function alone he bears the full specification and enforcement costs, but in return appropriates only a proportion of the assumed total gain (Vickers and Yarrow, 1988).

Accordingly, large shareholders can reduce agency problems (i.e. the inevitable conflicts of interest between shareholders and managers that were discussed in Section 2.2.3). They have both a general interest in profit maximisation and enough control over the assets of the firm to have their interests respected (Shleifer and Vishny 1986, 1997). As Shleifer and Vishny (1986) persuasively argue large shareholders have incentives to replace inefficient managers in order to improve company performance. By owing a large enough stake in the company, major shareholders find it profitable to monitor top management; the large shareholders' return on their own shares suffices to cover their monitoring costs. Finally, large shareholders not only have the incentive to exercise control but also the power to activate it through their excessive voting rights.

Nevertheless, the efficacy of large shareholders should not be taken for granted, since this is intimately tied to their ability to defend their rights, which in turn depends on the sophistication of the underlying legal system (Shleifer and Vishny 1997). Moreover, large investors may use their power to pursue their personal objectives (e.g. repurchase shares at a premium) by leaving management alone (Hart 1995; Shleifer and Vishny 1997). Finally, in the case the large shareholder is an institution, it is not clear whether

the manager - who acts on its behalf - will properly monitor the company as opposed to serve his own interests (Hart 1995).

The above discussion results in the development of the first main hypothesis of this chapter that is known as the *poor-performance* hypothesis. According to this proposition:

*H1: If the above internal monitoring mechanisms are effective and if firm financial performance reflects managerial performance, there should be a negative relation between the probability of a MSE change and corporate performance.*

The strength of the internal monitoring mechanisms, however, may vary for different levels of firm performance, as extremely poor performance increases the monitors' incentives (or even forces them) to fulfil their responsibilities towards the shareholders and hence, take disciplinary action. Moreover, internal monitoring mechanisms may have become more effective nowadays due to the presence of globalisation and intense competition. Accordingly, these issues will be further explored by investigating the poor-performance hypothesis across different ranges of firm performance and different sub-periods.

### *4.2.2 Managerial Entrenchment*

It is often argued that, since stock prices directly affect investors' wealth, it might seem that basing compensation on share prices would be the ideal way to align the interests of managers and shareholders (Lambert, 2001). Agency theorists, however, point out the offsetting costs of significant management ownership. Indeed, stock-based

compensation can have countervailing effects: an incentive alignment effect that increases with the percentage of share value owned by the managers and an entrenchment effect that increases with the percentage of shares votes controlled by managers. That is, the higher the equity ownership of the top manager, the greater his power and hence, the greater his influence on the firm's decisions.

Demsetz (1983b) and Fama and Jensen (1983), recognise that when a manager owns only a small stake, disciplining mechanisms may still force him towards value maximisation. In contrast, a manager who controls a substantial fraction of the firm's equity may have enough voting power or influence to guarantee his employment with the firm. In fact, as Jensen and Ruback (1983) argue, poor managers who resist being replaced might be the costliest manifestation of the agency problem.

Stulz (1988) models the effects of managerial control of voting rights in the context of the external control market. In particular, he focuses on the non-pecuniary benefits (e.g. the opportunity to invest in pet projects or the ability to offer jobs in the firm to friends and members of their family) that accrue to managers who own a sizeable stake of the equity of their company. He suggests that these benefits can be large enough to compel managers to resist take-over (which, if successful, could result in the departure of a substantial proportion of top executives) to protect their own interests.

Morck, Shleifer and Vishny (1988) extend this line of reasoning by proposing that substantive equity ownership may also hamper internal monitoring of management activities. As they argue, equity ownership may insulate top managers in two main ways. Firstly, managerial ownership can be correlated with managerial power through

the association of the former and the voting rights or other characteristics conducive to managerial entrenchment such as the manager's tenure, his/her status as the firm's founder etc. Secondly, equity ownership may inhibit the external control market (as demonstrated by Stulz 1988) and, in so doing, reduce the effectiveness of internal monitoring efforts. For example, an external control threat (e.g. take-over) may increase the likelihood that the board of directors feels pressured to take disciplinary action against a poorly performing manager, even if that board is aligned with the incumbent management team.

Hence, the above discussion leads to the well-known *entrenchment* hypothesis, according to which:

*H2: If MSEs own a substantial stake in their companies it should be harder to remove them, even in poorly performing companies.*

## 4.3 Contributions to Research

This section does not provide an extensive review of prior empirical work as this was done in Chapter 2. Instead it gives a brief summary of past empirical papers in order to refresh the memory of the reader. Having done so, it then focuses on the contributions of the current chapter.

In general, there is a well-documented negative relation between firm performance - both stock-based and accounting-based - and the probability of top executive turnover in the US (e.g. Coughlan and Schmidt 1985; Weisbach 1988; Warner et al. 1988; Parrino 1997; Huson et al. 1999). As highlighted in Chapter 2, the issue has also received

considerable interest from academics in the UK. Pioneering work in the area are the studies of Franks et al. 1996, Cosh and Hughes 1997 and Conyon 1998. The main limitations of these studies, however, stem mainly from the executive turnover data that either focuses on specific industries (Cosh and Hughes 1997) or captures relatively few years (e.g. Franks et al. 1996) or relies on mail surveys (Conyon 1998). Dedman (2000) and Dahya et al. (2001) provide two very recent studies on executive turnover in the UK. Despite the valuable insights of these studies, there are still certain limitations that were fully considered in Chapter 2.

The current chapter contributes to the executive turnover literature in the UK by providing a comprehensive analysis that is less subject to these limitations. In particular, this chapter distinguishes itself from the studies of Dedman (2000) and Dahya et al. (2001) in three main ways. Firstly, it maps executive departures by focusing on the identity of each company's Chairman, CEO and group Managing Director instead of just the Chairman or the CEO. This is of particular importance in the UK, since the title "Chief Executive Officer" has only comparatively recently been used to denote the top corporate position. As a result, this study is able to both more accurately identify the company's Most Senior Executive and capture a higher frequency of executive departures than before. Secondly, due to the quality of the data (as fully explained in Chapter 3) it performs a detailed analysis of all types of executive departures (including the retirements) and hence, uses a much less noisy measure of forced departures than previous studies (including the US studies). Finally, it investigates the poor - performance hypothesis across different levels of performance and under different time periods. In contrast, both Dedman (2000) and Dahya et al. (2001) focus on the impact of

a number of corporate governance characteristics on the turnover-performance association, in the pre- and post-Cadbury regime.

The entrenchment effect of managerial stock ownership remains controversial. Weisbach (1988), for example, demonstrates that CEO shareholdings may reduce the possibility that he resigns, but this reduction is not significant. In contrast, Denis et al. (1997), document that turnover is significantly less sensitive to performance at high managerial ownership levels. In the UK, Dahya et al. (1998) report that that managerial entrenchment effects can actually occur at extremely low ownership levels (e.g. below 1%), although the result is not significant at conventional levels. Similarly, Dedman (2000) concludes that even low ownership levels may reduce the dismissal probability whilst the entrenchment power of CEO share ownership does not seem to have diminished in the post-Cadbury regime. This chapter contributes to the above debate by providing additional evidence on the entrenchment hypothesis where the share ownership variable consists of the ordinary holdings of *only the Most Senior Executive and not of all officers and directors.*

## 4.4 Data and Model Estimation

This section deals with the main data set on which the current analysis was based, the empirical specification applied in order to examine the hypotheses under investigation, and the operationalisation of the analysis's dependent and explanatory variables.

### *4.4.1 The Data Set*

The analysis in Chapter 4 was drawn on the top 460 quoted UK over the period 1990-1998, the selection of which has been illustrated in Chapter 3. Moreover, it was based

on a sub-sample of the total 711 top executive departures identified. Specifically, the focus of the current analysis is the turnover of the leading executive, namely, the Most Senior Executive. This in turn resulted in a total of 3389 firm-year observations.

### *4.4.2 The Econometric Model*

Similarly to previous studies (Weisbach et al. 1988; Conyon 1998; Huson et al. 2001), the following probit model was estimated where $\Phi$ is the standard cumulative normal distribution with zero mean and unit variance:

$$\Pr (y_i \neq 0 / x_i\beta)=\Phi (x_i\beta)$$

When the dependent variable assumes discrete values, a non-linear regression model (i.e. logit or probit) as opposed to the linear probability regression model is most often preferred (Gujarati, 1998). This is mainly because a linear regression model assumes that the conditional probabilities increase linearly with the values of explanatory variables. However, the probabilities will tend to taper off as the values of the explanatory variables increase or decrease indefinitely. Consequently, what is needed is a probability model whose error term ($e_{it}$) follows the S-shaped feature of the cumulative distribution function. Two such models are the logit and probit models, which both guarantee that the estimated probability of the event (in this case the probability of the executive departure) will lie in the 0-1 range (Gujarati, 1998).

In the above probit model, the term $x_i\beta$ is the probit score, where x contains forcing variables and $\beta$ is the population vector to be estimated by maximum likelihood methods. Specifically, the x matrix contains proxies for stock-based and accounting-

based company performance, managerial stock ownership, company size, and managerial age. The term y is an indicator variable relating to the probability of top management departure. In particular, probit regressions were estimated under three definitions of a management change: a) all Most Senior Executive changes, b) forced Most Senior Executive changes and c) non-forced Most Senior Executive changes[18]. A zero (0) indicates a negative outcome, whereas a one (1) represents a positive outcome, i.e. if there is a change in the Most Senior Executive in a given year. Finally, all probit models included specific industry and time effects.

The following sections consider in details the left-hand side (LHS) and the right-hand side (RHS) variables of the model.

***The LHS Variables***

The basic dependent variable in this study is the change in the Most Senior Executive. This is an indicator variable equal to one if the Most Senior Executive is not disclosed in the firm's top management team in year t+1, and zero otherwise. As highlighted in Chapter 2, title re-assignments were not treated as changes, since they are less likely to be associated with changes in the firm performance. Identifying the leading company executive in UK firms was a complicated task since the title "Chief Executive Officer" has only comparatively recently been used to signal the top corporate position. Other titles such as Chairman and Managing Director were also used - especially in earlier periods (see Table 3.1-Chapter 3). Clearly, given the complexity in constructing the data it is important to understand what the Most Senior Executive refers to. Accordingly, the

[18] An alternative approach would be to estimate a multinomial logit regression with three turnover outcomes: 0=no change, 1=forced change and 2=non-forced change. Comparing the two models, it was found that results were qualitatively consistent.

Most Senior Executive in each company for each year was taken to be the CEO if such a role existed. When no CEO existed the Most Senior Executive was taken to be either the Executive Chairman or the group Managing Director.

Out of the 711 total top executive departures identified in Chapter 3, 318 refer to MSE changes. Moreover, all Most Senior Executive departures were grouped into forced and non-forced according to the classification strategy described in Chapter 3. This process resulted in a total of 135 MSE forced departures and 180 MSE non-forced ones (a total of 315 observations)[19].

The number of firm observations, all, forced and non-forced MSE changes per year and per company is presented in Table 4.1. As indicated, there is no particular time-series trend in the actual turnover rate under all definitions of turnover. Moreover, there are no big fluctuations in all three turnover rates from year to year. The only exception are years 1990 and 1998 that have significantly lower turnover rates, compared to the rest of the sample years, since they represent a six-month period instead of a full twelve-month period. Finally, the turnover rate for the leading executives in UK companies is on average 9.4% whilst forced and non-forced MSE departures average 4% and 5.3% respectively.

[19] The three MSE departures - for which no information was found - were excluded from the sample construction, but included in the regression analysis when the dependent variable was *all* Most Senior Executive changes.

**Table 4.1: Sample Firms, All, Forced and Non-Forced MSE Changes by Year, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Year | Number of firms | All changes | Forced changes | Non-Forced changes |
|---|---|---|---|---|
| 1990 | 370 | 13 (3.5%) | 5 (1.4%) | 7 (1.9%) |
| 1991 | 380 | 37 (9.7%) | 18 (4.7%) | 18 (4.7%) |
| 1992 | 376 | 47 (12.5%) | 20 (5.3%) | 27 (7.2%) |
| 1993 | 380 | 43 (11.3%) | 16 (4.2%) | 27 (7.1%) |
| 1994 | 384 | 34 (8.9%) | 16 (4.2%) | 18 (4.7%) |
| 1995 | 391 | 42 (10.7%) | 14 (3.6%) | 28 (7.2%) |
| 1996 | 380 | 37 (9.7%) | 14 (3.7%) | 22 (5.8%) |
| 1997 | 373 | 45 (12.1%) | 20 (5.4%) | 25 (6.7%) |
| 1998 | 355 | 20 (5.6%) | 12 (3.4%) | 8 (2.3%) |
| **Total** | **3389** | **318 (9.4%)** | **135 (4.0%)** | **180 (5.3%)** |

Table 4.2 presents the reasons given by companies for the job separation as well as the number of forced and non-forced MSE departures by reason.

**Table 4.2: Forced and Non-Forced Most Senior Executive Changes by Stated Reason as Reported in the Financial Times, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Reasons | Forced changes | Non-Forced changes | Total |
|---|---|---|---|
| Retired and left board | 10 | 78 | 88 |
| Retired and stayed on board | 1 | 11 | 12 |
| Normal succession | 0 | 11 | 11 |
| Death | 0 | 5 | 5 |
| Health/Illness | 0 | 15 | 15 |
| Policy/Personality disagreement | 16 | 0 | 16 |
| Poor performance | 47 | 0 | 47 |
| Personal reasons/Other interests | 8 | 8 | 16 |
| Take position in another firm | 1 | 16 | 17 |
| Fired | 1 | 0 | 1 |
| Assume other position in firm | 3 | 11 | 14 |
| Take-over/Merger | 0 | 12 | 12 |
| De-merger | 0 | 6 | 6 |
| Scandal | 8 | 0 | 8 |
| Other | 10 | 7 | 17 |
| No clear reason reported | 19 | 0 | 19 |
| Limited Information | 11 | 0 | 11 |
| **Total** | **135** | **180** | **315** |

As expected the most commonly reported reason as well as the majority of the non-forced departures is retirement; 100 cases (31.7% of the total sample and 49.4% of the non-forced departures). Note that there were 11 cases for which information available was limited. Initially they were grouped as forced but because there is a possibility of misclassification in this case, the current analysis performed an additional test to examine the robustness of the results. This will be fully described at a later stage.

***The RHS Variables***

In order to test the poor-performance hypothesis two main measures of company performance were used in this study. These include (variable coding as well as Datastream item or data type shown in brackets):

a) Company stock returns (SHR): The return on the company's stock was calculated as the log of $(RI_{t+1}/RI_t)$, where RI stands for the company's return index on 1st January as discussed in Chapter 3.

b) Accounting returns (EBIT): In an efficient market stock prices anticipate the future benefits of the possibility of CEO dismissal and therefore tend to increase, as the capital market becomes aware of new avenues for management improvement. As a result, they may under-estimate the monitoring role of internal disciplining devices. Accounting-based measures, on the other hand, are more stable and are not vulnerable to speculative or exogenous shocks (although a counter argument could be that accounting-based measures may be both susceptible to managerial

manipulation and endogenous)[20]. Accounting earnings may, therefore, play a significant role in the process of internal governance of companies. Company accounting returns were calculated as the level of accounting earnings before interest and tax (1300) standardised by the book value of the firm's total assets in the beginning of the year (391) to control for size differences.

In addition to the company's own performance measures, the study tested the sensitivity of the results by using relative performance measures. These include: a) industry adjusted stock returns (RSHR) and b) industry adjusted accounting returns (REBIT). Since the construction of the relative performance measure is the same for both stock returns and accounting returns the discussion here will focus on one of them. Accordingly, the industry adjusted stock returns were measured as follows:

a) The median value of stock returns for all firms in the same one-digit SIC industry and for each year was separately calculated.

b) Company's own stock returns were then adjusted for each year by subtracting the equivalent median value (i.e. the median value of the industry in which the firm was active). Hence, a positive difference indicates that the company outperforms the industry whilst the opposite holds if there is a negative difference.

Moreover, lagged firm performance instead of current performance was used. This was chosen because of two main reasons. Firstly, because of potential endogeneity problems. Whilst this year's poor firm performance may lead to an executive departure,

[20] Peasnell et al. (1999), for example, provide evidence that when the proportion of non-executives is high, managers are less likely to make income-increasing accruals to avoid reporting earnings losses or declines.

such an event may also affect current performance. In this case, firm performance is no longer exogenous. Secondly, there is generally a time lag between poor firm performance and the board's decision to remove inefficient managers. Of course, it is plausible that the time lag could be relatively short, in which case contemporaneous performance - measured by quarterly data - could also be incorporated in the model. Given the unavailability of quarterly data in the UK, annual lagged performance measures in years t-1 and t-2 were used. Since previous studies indicate that firm performance more than two years prior to the unit of observation is not a significant explanator of executive turnover (Warner et al. 1988; Hadlock and Lumer 1997), this study did not include lagged performance measures beyond year t-2.

In order to test the entrenchment hypothesis, managerial ordinary stock ownership (STAKE) was operationalised as the fraction of ordinary shares owned by the Most Senior Executive. Note that managerial option holdings were not included in the analysis, since they do not entitle executives to additional voting rights and hence, are not correlated with power. Several studies argue that company size and CEO age are potentially important predictors of the turnover possibility (Warner et al. 1988; Jensen and Murphy 1990). This analysis caters for these effects by incorporating in the model size and age as control variables. Accordingly, size (SIZE) was measured as the log of the market value of the company (MV) and managerial age (AGE) was calculated for each year and each Most Senior Executive based on his/her birth date.

Finally, a set of indicator variables allocating companies to their 1-digit industry group (INDUSTRY EFFECTS) as well as set of indicator variables allocating observations to

one of the nine sample years, i.e. 1990-1998, (TIME EFFECTS) were also included in all regression models.

Descriptive statistics of the distributions of the independent variables are given in Table 4.3.

**Table 4.3: Summary Statistics of All Independent Variables, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Variable | Obs. | Mean | Std. Dev. | Min. | Max. | 1st Quartile | Median | 3rd Quartile |
|---|---|---|---|---|---|---|---|---|
| SHR | 3296 | 0.065 | 0.407 | -3.993 | 1.760 | -0.101 | 0.100 | 0.297 |
| EBIT | 2994 | 0.114 | 0.126 | -1.217 | 2.458 | 0.066 | 0.110 | 0.161 |
| RSHR | 3296 | -0.028 | 0.373 | -3.964 | 1.583 | -0.159 | 0.012 | 0.161 |
| REBIT | 2994 | 0.004 | 0.123 | -1.346 | 2.309 | -0.039 | 0.000 | 0.044 |
| MV | 3366 | 1981.4 | 4441.9 | 0.28 | 74902.8 | 265.76 | 604.72 | 1771.25 |
| SIZE (log MV) | 3366 | 6.530 | 1.432 | -1.272 | 11.223 | 5.582 | 6.404 | 7.479 |
| AGE | 3356 | 53.64 | 6.68 | 31 | 81 | 49 | 54 | 58 |
| STAKE | 3314 | 0.023 | 0.089 | 0.000 | 0.894 | 0.000 | 0.003 | 0.028 |

As indicated, the size variable - initially measured as the market value of the company - is particularly skewed. Consequently, size was log-transformed and the distribution of the transformed variable approaches normal. The mean company shareholder return and accounting return is 0.065 and 0.114 respectively whilst industry adjusted stock returns and accounting returns are on average -0.028 and 0.004 respectively. The mean company market value is £1981m. Finally, Most Senior Executives are on average 54 years old and hold 2.3% of the company's total equity.

To conclude this section, Tables 4.4 and 4.5 present the mean standard Pearson correlations between all continuous variables, where firm performance is measured by company's own returns and company's relative returns respectively.

**Table 4.4: Standard Pearson Correlations of Independent Variables (Company's Own Performance), Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| | $SHR_{t-1}$ | $SHR_{t-2}$ | $EBIT_{t-1}$ | $EBIT_{t-2}$ | SIZE | AGE | STAKE |
|---|---|---|---|---|---|---|---|
| $SHR_{t-1}$ | - | | | | | | |
| $SHR_{t-2}$ | 0.06 | - | | | | | |
| $EBIT_{t-1}$ | 0.27 | 0.23 | - | | | | |
| $EBIT_{t-2}$ | 0.09 | 0.24 | 0.54 | - | | | |
| SIZE | 0.25 | 0.18 | 0.09 | 0.07 | - | | |
| AGE | 0.00 | 0.00 | -0.01 | -0.01 | 0.13 | - | |
| STAKE | 0.05 | 0.03 | 0.06 | 0.06 | -0.16 | 0.08 | - |

**Table 4.5: Standard Pearson Correlations of Independent Variables (Company's Relative Performance), Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| | $RSHR_{t-1}$ | $RSHR_{t-2}$ | $REBIT_{t-1}$ | $REBIT_{t-2}$ | SIZE | AGE | STAKE |
|---|---|---|---|---|---|---|---|
| $RSHR_{t-1}$ | - | | | | | | |
| $RSHR_{t-2}$ | 0.13 | - | | | | | |
| $REBIT_{t-1}$ | 0.30 | 0.25 | - | | | | |
| $REBIT_{t-2}$ | 0.12 | 0.27 | 0.51 | - | | | |
| SIZE | 0.24 | 0.18 | 0.11 | 0.09 | - | | |
| AGE | 0.00 | -0.00 | -0.01 | -0.01 | 0.13 | - | |
| STAKE | 0.06 | 0.04 | 0.05 | 0.05 | -0.16 | 0.08 | - |

As shown in the above Tables, there is not a large degree of association between the study's independent variables, with the exception of the first and second years' accounting returns whose correlation is relatively high (approximately 0.5). Accounting returns, however, are hypothesised to jointly determine the CEO turnover likelihood.

## 4.5 Results and Interpretations

The econometric results are contained in Tables 4.6-4.14. To put the results in economic perspective, the marginal effects rather than the coefficient estimates of the probit models are presented. The derivative of the probability of turnover with respect to a particular regressor illustrates the marginal effect of this regressor (Greene, 2000). It is obvious that marginal effects will vary with the values of x. Accordingly, marginal effects were calculated at the mean values of all the variables (Greene, 2000). Moreover, p-values in parentheses are reported.

This section begins by presenting the baseline results on the poor-performance hypothesis. It then continues with the further exploration of the hypothesis across different ranges of firm performance and different time periods. The section finishes with the investigation of the managerial entrenchment issue.

### *4.5.1 The Turnover-Performance Relation*

This section evaluates the impact of stock-based and accounting-based performance on the likelihood of a top management change. Table 4.6 presents the basic probit estimation results on the relation between top management turnover and performance measures. Note that A stands for all Most Senior Executive departures, F for forced MSE departures and NF for non-forced MSE departures.

**Table 4.6: Estimates of Probit Models Relating MSE Turnover to Stock-Based and Accounting-Based Performance, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Model 1 Dependent Variables | | | Model 2 Dependent Variables | | |
|---|---|---|---|---|---|---|
| | A | F | NF | A | F | NF |
| $SHR_{t-1}$ | -0.081 | -0.053 | -0.005 | -0.082 | -0.045 | -0.018 |
| | (0.000) | (0.000) | (0.607) | (0.000) | (0.000) | (0.104) |
| $SHR_{t-2}$ | -0.016 | -0.008 | -0.004 | -0.007 | -0.000 | -0.007 |
| | (0.249) | (0.284) | (0.706) | (0.632) | (0.984) | (0.548) |
| $EBIT_{t-1}$ | - | - | - | -0.173 | -0.122 | 0.003 |
| | | | | (0.003) | (0.001) | (0.936) |
| $EBIT_{t-2}$ | - | - | - | 0.093 | 0.008 | 0.050 |
| | | | | (0.079) | (0.808) | (0.126) |
| SIZE | -0.003 | -0.001 | -0.000 | -0.000 | 0.000 | 0.000 |
| | (0.356) | (0.471) | (0.936) | (0.835) | (0.808) | (0.847) |
| AGE | 0.003 | -0.000 | 0.003 | 0.004 | 0.000 | 0.003 |
| | (0.000) | (0.865) | (0.000) | (0.000) | (0.778) | (0.000) |
| Time Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 3039 | 3037 | 3037 | 2828 | 2826 | 2826 |
| Pseudo $R^2$ | 0.066 | 0.101 | 0.071 | 0.075 | 0.115 | 0.082 |
| Log Lik. | -848.9 | -439.4 | -560.1 | -785.2 | -408.4 | -514.2 |

**NOTES:**
1. A: All Most Senior Executive changes; F: Forced changes; NF: Non-Forced changes
2. p-values in parentheses

Consistent with prior research both in the US and the UK (e.g. Parrino 1997; Conyon 1998), poor firm performance increases the probability of executive turnover. Model (1) presents estimates where two lags of own stock return as the independent variables were included. The marginal increase in the probability of executive turnover and forced turnover, when there is a marginal decrease in stock performance, is 0.081 and 0.053 respectively; both estimates are significant at less than the 1% level. Lag two of stock return is not significant for both all changes and forced changes.

In Model (2) two lags of accounting returns as additional performance variables were included. The negative marginal effect of the first lag of EBIT (–0.173 for all changes

and –0.122 for forced changes) reinforces the previous finding that top managers are dismissed for poor performance. Contrary to stock returns, the second lag of accounting returns has a positive marginal effect, but is not significant at conventional levels other than in the all changes model. In particular, under all changes the second lag of accounting returns enters with a positive sign of 0.093 and is significant at the 10% level. An interpretation of this result is given below. A general model of executive turnover is:

$$\Pr(MSE\,Turnover_{it}) = a + \beta_1 \Pi_{it-1} + \beta_2 \Pi_{it-1} + \beta_3 Size_{it} + \beta_4 Age_{it} + \varepsilon_{it} \quad \text{(a)}$$

where $\Pi$ is a measure of level of profit, and in this case of accounting profit. Model (a) could be re-written as:

$$\Pr(MSE\,Turnover_{it}) = a + (\beta_1 + \beta_2)\Pi_{it-1} - \beta_2(\Pi_{it-1} - \Pi_{it-2}) + \beta_3 Size_{it} + \beta_4 Age_{it} + \varepsilon_{it} \quad \text{(b)}$$

According to Model (b), the sum of $\beta_1$ and $\beta_2$ estimates the effect of a change in prior year's *level* of accounting earnings whilst $\beta_2$ estimates the effect of a change in prior year's *difference* in accounting earnings. An alternative interpretation of the estimates is, therefore, that the turnover probability will increase by 0.080 (-0.173+0.093) if there is a unit decrease in the *level* of prior year's accounting earnings or by 0.093 if there is a one unit decrease in the *growth* of prior year's accounting earnings. Finally, the inclusion of accounting earnings in Model (2) does not alter the effect of prior year's shareholder returns which remains negative and significant under both all changes and forced changes.

As mentioned in Chapter 2, the effectiveness of the internal control mechanisms can be assessed by comparing forced departures with non-forced departures. The estimates of all performance measures in the non-forced turnover in Model (2) reveal that, in contrast with forced top executive changes, there is no evidence of significant relation between the likelihood of non-forced departure and performance. Instead non-forced departures are driven mainly by the age variable which enters with a positive sign (0.003) and significant at less than the 1% level. Bearing in mind that the majority of non-forced departures were due to retirement (49.4%-see Table 4.2) the result suggests that the older the executive the closer he is to retirement age and hence the higher the probability of voluntary turnover.

Overall, results in Table 4.6 suggest that internal governance institutions, such as the directors' board or large shareholders, are effective in their monitoring and disciplining tasks. This thesis attempted to expand the above analysis by identifying some of the characteristics of an effective board. In particular, two board level variables - often considered in the literature - were incorporated in the turnover equations of Model (2) - Table 4.6. These include: a) board size (242) and b) board independence measured by the proportion of non-executive (outside) directors (243)[21]. CEO turnover is presumed to be positively associated with the fraction of outside directors (Fama and Jensen 1983; Williamson 1983) - although as discussed in Section 4.2.1 several outside director characteristics may inhibit their efficiency - and negatively associated with board size (Paton and Backer 1987; Lipton and Lorsch 1992; Jensen 1993).

[21] Datastream item shown in brackets.

The primary results of this analysis can be summarised as follows. Firstly, it was found that on average UK boards consist of 10 directors of which 45% are non-executives. Secondly, analysis indicated that the fraction of non-executives is not a significant predictor of CEO turnover under all three types of changes. Thirdly, contrary to theoretical expectations, board size appears to be positive and significant under all and forced MSE departures at the 10% and 5% level respectively. Nevertheless, the economic significance of this variable is trivial; a marginal increase in board size is associated with a 0.2 percentage points increase in the forced MSE turnover likelihood. Finally, the inclusion of the two board level measures does not change the effect of the study's primary explanatory variables; the marginal effect of prior year's stock returns is -0.084 and -0.047 for all and forced changes respectively whilst the equivalent marginal effects of prior year's accounting returns are -0.184 and -0.124. Once again, performance is not associated with non-forced MSE departures.

To close this section, it is important to emphasise that the above findings should be treated with caution as they are subject to two main caveats. Firstly, the quality of the data may bias the results. More specifically, in his pioneering study on the efficiency of board monitoring, Weisbach (1988) classifies directors into three categories: a) outsiders: those who neither work for the firm nor have extensive dealings with it, b) insiders: full-time employees of the firm and, c) grey: those who are not employees, but who may not be entirely independent of existing management due to their extensive business dealings with the company or family affiliations with the management. Since the "proportion of outside directors" variable - employed in the current study - is not able to isolate the effect of "grey" directors, the efficiency of outsiders may be under-estimated.

Finally, the endogeneity of board monitoring may limit our ability to directly model the efficacy of board in replacing poorly-performing CEOs. The vast majority of empirical studies (including the current one) treat board size and board composition as exogenous variables (e.g. Weisbach 1988; Hadlock and Lumer 1997; Dedman 2000; Dahya et al. 2001). However, a recent stream of theoretical papers model CEO monitoring where boards are treated as endogenously-determined institutions (Hermalin and Weisbach 1998, 2000; Warther 1998). The striking insight of these studies is that the intensity with which CEO monitoring is carried out decreases under the assumption that board composition or (more generally, the behaviour of the board) is itself determined by various CEO characteristics (e.g. tenure). Therefore, until board endogeneity is explicitly addressed the power of the tests to detect the elements of an effective board is compromised.

### *4.5.2 The Turnover Likelihood over Ranges of Firm Performance*

The impact of firm performance on executive changes was further explored by investigating whether different levels of performance have a different effect on top management turnover. In particular, each firm was assigned to a decile based on the prior's year shareholder returns and accounting returns over the entire period 1990-1998. Within its decile, the mean actual turnover rate of all types of Most Senior Executive changes (i.e. all changes, forced changes and non-forced changes) was then calculated. Turnover statistics are presented in Table 4.7.

**Table 4.7: Actual Turnover Rates of All, Forced and Non-Forced MSE Changes by Decile of Annual Shareholder Return and Accounting Return, Time Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Decile | Observations | | Mean | | All changes | | Forced changes | | Non-Forced changes | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $SHR_{t-1}$ | $EBIT_{t-1}$ | $SHR_{t-1}$ | $EBIT_{t-1}$ | $SHR_{t-1}$ | $EBIT_{t-1}$ | $SHR_{t-1}$ | $EBIT_{t-1}$ | $SHR_{t-1}$ | $EBIT_{t-1}$ |
| 1 | 320 | 301 | -0.671 | -0.078 | 0.184 | 0.159 | 0.134 | 0.096 | 0.050 | 0.063 |
| 2 | 320 | 300 | -0.212 | 0.037 | 0.156 | 0.150 | 0.084 | 0.096 | 0.071 | 0.053 |
| 3 | 320 | 300 | -0.081 | 0.067 | 0.106 | 0.093 | 0.053 | 0.050 | 0.053 | 0.043 |
| 4 | 320 | 300 | 0.010 | 0.087 | 0.081 | 0.106 | 0.031 | 0.040 | 0.047 | 0.066 |
| 5 | 320 | 300 | 0.086 | 0.105 | 0.071 | 0.100 | 0.028 | 0.043 | 0.043 | 0.056 |
| 6 | 320 | 300 | 0.158 | 0.123 | 0.068 | 0.106 | 0.012 | 0.043 | 0.056 | 0.060 |
| 7 | 320 | 300 | 0.231 | 0.143 | 0.087 | 0.050 | 0.015 | 0.010 | 0.071 | 0.040 |
| 8 | 320 | 300 | 0.309 | 0.167 | 0.062 | 0.040 | 0.012 | 0.003 | 0.047 | 0.033 |
| 9 | 320 | 300 | 0.409 | 0.201 | 0.078 | 0.076 | 0.018 | 0.013 | 0.059 | 0.063 |
| 10 | 320 | 300 | 0.660 | 0.346 | 0.053 | 0.066 | 0.012 | 0.010 | 0.040 | 0.056 |

Mean own stock return of the previous year ($SHR_{t-1}$) ranges from –0.671 in the bottom decile (1) to 0.660 in the top decile (10). Mean accounting returns of the previous year ($EBIT_{t-1}$) ranges from –0.078 in the bottom decile (1) to 0.346 in the top decile (10). As shown, the frequency of all MSE departures and forced MSE departures declines significantly from the bottom performance decile to the top performance decile and this finding is invariant for both performance metrics. In contrast, the frequency of non-forced turnover does not vary significantly across different performance deciles. Results, therefore, suggest that only extreme levels of performance affect the turnover rate and in particular, the dismissal rate.

The robustness of the above suggestions was investigated with more rigorous econometric exploration. Firstly the implied probabilities of all, forced and non-forced Most Senior Executive turnover based on the probit estimates from the complete Model (2) in Table 4.6 were calculated. These probabilities were then sorted into the performance deciles. Finally, implied probabilities were averaged within each decile.

Table 4.8 reports results for all MSE changes, forced and non-forced changes when performance is measured by shareholder returns and accounting earnings.

**Table 4.8: Predicted Probabilities of All, Forced and Non-Forced MSE Changes by Decile of Annual Shareholder Return and Accounting Return, Time Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Decile | Mean | | All changes | | Forced changes | | Non-Forced changes | |
|---|---|---|---|---|---|---|---|---|
| | $SHR_{t-1}$ | $EBIT_{t-1}$ | $SHR_{t-1}$ | $EBIT_{t-1}$ | $SHR_{t-1}$ | $EBIT_{t-1}$ | $SHR_{t-1}$ | $EBIT_{t-1}$ |
| 1 | -0.671 | -0.078 | 0.186 | 0.150 | 0.128 | 0.112 | 0.060 | 0.046 |
| 2 | -0.212 | 0.037 | 0.111 | 0.109 | 0.048 | 0.055 | 0.056 | 0.049 |
| 3 | -0.081 | 0.067 | 0.097 | 0.096 | 0.038 | 0.039 | 0.054 | 0.052 |
| 4 | 0.010 | 0.087 | 0.091 | 0.091 | 0.033 | 0.035 | 0.053 | 0.051 |
| 5 | 0.086 | 0.105 | 0.084 | 0.087 | 0.031 | 0.032 | 0.050 | 0.050 |
| 6 | 0.158 | 0.123 | 0.077 | 0.086 | 0.026 | 0.029 | 0.049 | 0.053 |
| 7 | 0.231 | 0.143 | 0.073 | 0.075 | 0.026 | 0.024 | 0.046 | 0.048 |
| 8 | 0.309 | 0.167 | 0.065 | 0.073 | 0.020 | 0.022 | 0.044 | 0.049 |
| 9 | 0.409 | 0.201 | 0.058 | 0.068 | 0.016 | 0.019 | 0.045 | 0.048 |
| 10 | 0.660 | 0.346 | 0.043 | 0.050 | 0.012 | 0.010 | 0.035 | 0.048 |

Consistent with the unconditional frequencies, it appears that unless performance is very poor the turnover possibility is not significantly high. When performance is measured by the prior's year own stock return, the mean predicted turnover rate declines from 0.186 for the group of worst performers to 0.043 for the group of best performers under all Most Senior Executive changes. In addition, top managers in firms of the worst performers are predicted to be about 10.6 times as likely to be forced out as top managers in firms of the best performers; in contrast, managers of the worst performing companies are predicted to be about only 1.7 times as likely to voluntarily depart as top managers of the best performing companies.

Similar results are obtained when performance is measured by prior's year accounting return. The implied probabilities of removal decline again from 0.150 to 0.050 for all

Most Senior Executive changes and from 0.112 to 0.010 for forced changes whereas predicted probabilities of non-forced turnover are almost the same across different performance deciles. Overall, these probability estimates suggest that internal control mechanisms seem to be effective in monitoring and replacing inefficient managers. Performance levels however, need to be extreme for internal monitors to take disciplinary action as they may have an information advantage over the investors. The results are consistent with the findings of Warner et al. (1988), who based on a sample of 269 US listed companies over the period 1963-1978 document that the probability of a forced CEO turnover decreases from 3.1% in the bottom 10% of firms to 0.7% in the top 10% of the firms.

### *4.5.3 The Turnover-Performance Relation over Time*

The specification in Table 4.6 assumes that the relation between performance and turnover likelihood is the same for the entire period 1990-1998. However, there have been many claims that in the presence of global product market competition investors and boards are expecting increasingly superior CEO performance. These claims were investigated by evaluating the impact of firm performance on top management turnover in two sub-samples.

Specifically, the sample was split into two periods; the first one includes sample years 1991, 1992 and 1993 whereas the second one consists of years 1994, 1995, 1996 and 1997. Note that years 1990 and 1998 were excluded from this analysis as they represent a six-month period compared to the rest sample years that denote a full twelve-month period. The aim of this test is to evaluate the time effect on the turnover-performance relation; consequently, only those sample years that are comparable should be included.

Moreover, as shown in Section 4.5.1 the second lags of firm performance - both stock-based and accounting-based - are not significant predictors of the turnover possibility and hence, were excluded from this analysis. Again, size and age were used as control variables whereas specific industry and time effects were incorporated in the model. The results of this analysis are given in Table 4.9.

As shown, executive turnover is negatively and significantly correlated with both stock-based and accounting-based performance only during the period 1994-1997, suggesting thus that top executives are more likely to leave office nowadays compared with the past. In particular, during 1994-1997 the marginal effect of prior year's shareholder return in the case of all changes is –0.134 whilst the marginal effect of accounting earnings is –0.185; estimates are significant at the 1% and 5% level respectively. In contrast, changes in both stock returns and accounting earnings do not affect the turnover possibility in the period 1991-1993.

Moreover, a marginal fall in share prices is associated with a 0.064 increase in the possibility of a non-forced departure during 1994-1997. Results, therefore suggest that managers are more likely to voluntarily depart nowadays compared with yesterday. A plausible explanation could be that as stock options are a significant component of executive compensation (Conyon and Murphy 2000b), CEOs of poorly performing companies choose to leave office and seek for another employer as the value of their total wealth is declining.

**Table 4.9: Estimates of Probit Models Relating MSE Turnover to Prior Year's Firm Performance over Time, Time-Period: 1991-1997, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | All changes | Forced changes | Non-Forced changes |
| $SHR_{91-93}$ | -0.034 | -0.034 | 0.026 |
| | (0.165) | (0.009) | (0.303) |
| $SHR_{94-97}$ | -0.134 | -0.054 | -0.064 |
| | (0.000) | (0.000) | (0.002) |
| $EBIT_{91-93}$ | -0.187 | -0.204 | 0.011 |
| | (0.105) | (0.001) | (0.856) |
| $EBIT_{94-97}$ | -0.185 | -0.128 | -0.008 |
| | (0.019) | (0.004) | (0.880) |
| SIZE | -0.005 | 0.000 | -0.003 |
| | (0.221) | (0.858) | (0.247) |
| AGE | 0.004 | -0.000 | 0.004 |
| | (0.000) | (0.887) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 2334 | 2332 | 2332 |
| Pseudo $R^2$ | 0.060 | 0.103 | 0.071 |
| Log Lik. | -738.1 | -375.6 | -496.5 |

**NOTE:** p-values in parentheses

The important question, however, is whether top executives are more likely to be dismissed today than in the past. When the dependent variable of the model is forced changes results are mixed. The marginal effect of prior year's stock returns is more negative in the period 1994-1997 than in 1991-1993 (-0.054 as opposed to –0.034). On the other hand, the marginal effect of prior year's accounting earnings is more negative in the period 1991-1993 than in 1994-1997 (-0.204 as opposed to –0.128). In both cases of performance measures, however, the difference between the two effects is not statistically significant; the p-value of the $\chi^2$-statistic for the difference in the estimates is 0.250 for stock returns and 0.316 for accounting earnings.

The above evidence combined with the fact that there is no particular time-series pattern in the actual MSE turnover rates by year (as indicated in Table 4.1) suggest that MSEs are not more likely to be dismissed for poor performance. That is the disciplining effect

of poor performance for this sample of companies and this time period has not become stronger over time. This is consistent with the evidence reported by Huson et al. (2001) and Murphy (1999) for the United States. Based on four six-year sub-periods (i.e. 1971-1976, 1977-1982, 1983-1988, and 1989-1994), Huson et al. (2001) conclude that the estimated forced turnover-performance relation is stronger in the 1977-1982 sub-period than in either the 1983-1988 or the 1989-1994 sub-period, when performance is measured by accounting returns whilst it does not vary significantly across the different time periods when performance is measured by stock returns. In his analysis, Murphy (1999) shows that in the S&P 500 industrials a negative CEO turnover performance correlation can be established for the period 1980 to 1989. However, for the latter period 1990 to 1995 there is no relationship between CEO turnover and net of market returns.

Finally, it is worth commenting on the robustness of the above findings. Ideally, the two sub-samples in this analysis should include the same number of years. Since, however, in total there are seven comparable years available (i.e. 1991-1997), the split can be either into 1991-1993 and 1994-1997 or 1991-1994 and 1995-1997. The important point is that irrespective of the partitioning strategy the results remain broadly the same. For example, the marginal effect of prior year's accounting returns on the possibility of a forced turnover (that is of greater importance as opposed to all changes or non-forced changes) is more negative during 1991-1994 than in 1995-1997. In contrast, a marginal decrease in prior year's stock returns has almost the same impact on forced turnover during both periods (marginal effects are -0.43 in 1991-1995 and -0.35 over 1995-1997). Under both performance metrics, however, the difference between the two effects is not statistically significant; the p-value of the $\chi^2$-statistic for the difference in

the estimates is 0.650 for stock returns and 0.530 for accounting earnings. This in turn reinforces the main conclusion that the disciplining effect of top executives has not strengthened over the time.

### *4.5.4 Turnover and MSE Stock Ownership*

This section investigates the entrenchment hypothesis. That is, whether high managerial ownership levels reduce the removal possibility. Accordingly, the impact of managerial stock ownership on the turnover likelihood was tested, by adding to the baseline probit equations (see Table 4.6) the STAKE variable. Table 4.10 reports the marginal effects of changes in the Most Senior Executive stock ownership on the turnover possibility under all, forced and non-forced departures.

**Table 4.10: Estimates of Probit Models Relating MSE Turnover to Stock Ownership, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | **All changes** | **Forced changes** | **Non-Forced changes** |
| $SHR_{t-1}$ | -0.073 | -0.042 | -0.013 |
| | (0.000) | (0.000) | (0.228) |
| $SHR_{t-2}$ | -0.000 | 0.002 | -0.003 |
| | (0.970) | (0.815) | (0.793) |
| $EBIT_{t-1}$ | -0.161 | -0.119 | 0.009 |
| | (0.005) | (0.001) | (0.797) |
| $EBIT_{t-2}$ | 0.091 | 0.011 | 0.047 |
| | (0.074) | (0.734) | (0.124) |
| STAKE | -0.279 | -0.096 | -0.163 |
| | (0.002) | (0.039) | (0.024) |
| SIZE | -0.003 | 0.000 | -0.001 |
| | (0.318) | (0.987) | (0.470) |
| AGE | 0.004 | 0.000 | 0.003 |
| | (0.000) | (0.685) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 2793 | 2791 | 2791 |
| Pseudo $R^2$ | 0.081 | 0.113 | 0.092 |
| Log Lik. | -762.8 | -399.5 | -496.0 |

**NOTE:** p-values in parentheses

Interestingly enough executive stock ownership is negatively and significantly associated with the likelihood of non-forced departure probability. A plausible interpretation of this finding could be that the higher the ownership level, the higher the interest in the going-concern of the company and hence, the lower the willingness of the executive to leave the company. An alternative explanation could be that as top executives know they will depart they decide to sell part of their stake, especially if the company is performing well and the share price is fairly high.

The entrenchment hypothesis, however, refers mainly to the impact of stock ownership on the dismissal possibility. As shown, a one unit increase in managerial stock ownership decreases the likelihood of executive turnover by about 28 percentage points and the forced change possibility by almost 10 percentage points. The results, therefore, suggest that although stock ownership may serve to align the interests between shareholders and managers, it is also negatively related to MSE turnover. Note that prior year's share performance and accounting performance measures remain negative and significant for both all changes and forced departures.

However, the interpretation of this negative correlation between forced MSE turnover and equity stakes is open to two competing explanations. On the one hand high ownership stakes entrench management and make it difficult for the corporate board to remove them. This is the entrenchment view. On the other hand large equity stakes reduce agency costs and so one would expect to see less turnover in companies where the top executive holds a significant equity stake. In other words, the higher the managerial stock ownership the lower the need for disciplining top managers, as they

themselves become shareholders and are penalised by the declining value of their wealth.

The real point is whether MSEs are less likely to be fired for poor corporate performance in companies where the MSE has a significant share stake. This analysis discriminates between the two views by evaluating the turnover-performance relation in two sub-samples. Specifically, the sample was partitioned into those firms with executive stock ownership above the median and those with equity ownership below the median. If managers do become entrenched at high levels of stock ownership one should expect to see a less negative effect of performance on turnover when equity ownership is above the median than when ownership is below the median. In fact, if managers are so entrenched one does not rule out observing no correlation between MSE turnover performance in the high managerial equity stake sub-sample.

Table 4.11 presents the marginal effects of both share performance and accounting performance for the two sub-samples. As shown, in both groups of companies a marginal decrease in prior year's share performance increases the turnover possibility. More importantly, however, is the fact that this marginal effect is about the same for companies with high levels of stock ownership and those with low levels of ownership. The marginal effect of prior year's stock return is -0.075 in the below-median sample and -0.077 in the above-median sample for all changes. In the forced changes model, prior year's stock return enters with a less negative sign in the above-median sample compared with the below-median sample (0.037 as opposed to 0.049).

Contrary with the predictions, a marginal decrease in previous year's accounting earnings increases the probability of both all and forced turnover (marginal effects are -0.171 and –0.101 respectively) in the above-median sample whereas there seems to be no association between accounting performance and executive turnover in the below-median sample. Overall, there is little evidence suggesting managerial entrenchment in companies with high levels of equity stake owned by top managers. The results are broadly in line with the conclusions reached by Dahya et al. (1998), who based on UK data report that there is no evidence of managerial entrenchment effects at high ownership levels (e.g. above 5%), although they document that such a behaviour may actually take place at low ownership levels.

**Table 4.11: Estimates of Probit Models Relating MSE Turnover to Firm Performance where Sample is Partitioned by the Median MSE Share Stake, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | | | | |
|---|---|---|---|---|---|---|
| | All changes | | Forced changes | | Non-Forced changes | |
| | Below | Above | Below | Above | Below | Above |
| $SHR_{t-1}$ | -0.075 | -0.077 | -0.049 | -0.037 | -0.012 | -0.015 |
| | (0.002) | (0.000) | (0.001) | (0.000) | (0.417) | (0.260) |
| $SHR_{t-2}$ | 0.001 | -0.013 | -0.006 | 0.002 | 0.009 | -0.017 |
| | (0.963) | (0.444) | (0.689) | (0.731) | (0.588) | (0.205) |
| $EBIT_{t-1}$ | -0.117 | -0.171 | -0.067 | -0.101 | -0.055 | 0.037 |
| | (0.199) | (0.014) | (0.254) | (0.008) | (0.284) | (0.560) |
| $EBIT_{t-2}$ | 0.209 | 0.041 | 0.019 | -0.010 | 0.152 | 0.005 |
| | (0.031) | (0.492) | (0.742) | (0.749) | (0.005) | (0.881) |
| SIZE | -0.010 | -0.000 | -0.000 | -0.003 | -0.006 | 0.003 |
| | (0.072) | (0.908) | (0.888) | (0.342) | (0.058) | (0.374) |
| AGE | 0.007 | 0.002 | 0.000 | -0.000 | 0.005 | 0.002 |
| | (0.000) | (0.016) | (0.145) | (0.442) | (0.000) | (0.001) |
| Time Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 1366 | 1462 | 1365 | 1418 | 1365 | 1461 |
| Pseudo $R^2$ | 0.094 | 0.098 | 0.072 | 0.206 | 0.145 | 0.085 |
| Log Lik. | -386.5 | -380.5 | -216.8 | -179.4 | -240.8 | -254.2 |

**NOTES:**

1. p-values in parentheses
2. Median stake equals 0.0003

## 4.6 Additional Robustness Tests

This section reports some additional tests on the robustness of the baseline results. All models provide standard errors that have a stationary covariance matrix. This adjustment was made using the White (1980) method. Moreover, when modelling MSE turnover the analysis excluded those departures (14 in total) that took place in a year's time following another MSE departure (i.e. two consecutive MSE departures). In these cases, the departing executive cannot be held account for the firm's performance two years ago since his/her tenure lasted only one year. Results, however, could be biased because of three main reasons: a) the use of the *level* of accounting earnings instead of the *change* in accounting earnings, b) the misclassification of top executive changes, and c) the use of prior years' stock returns and accounting earnings as the appropriate performance measures.

### *4.6.1 Levels versus Changes in Accounting Earnings*

A priori there are no certain predictions as to which measure of accounting profit, i.e. level versus changes, is a better predictor of the turnover possibility. Moreover, prior studies use either one of the two measures (see Weisbach 1988 for changes in accounting earnings and Parrino 1997 for level of accounting earnings) or both (Huson et al. 2001). Accordingly, this study examined the sensitivity of the baseline results reported in Model (2) of Table 4.6, by replacing the level of accounting earnings with the change in accounting earnings. These results are shown in Table 4.12 below.

The primary findings are easy to summarise. Changes in past year's accounting performance are negatively and significantly associated with the turnover possibility and of course, the dismissal likelihood. In contrast, the main predictor of non-forced

departures remains the age of the top executives. Results, therefore, reveal that prior poor accounting performance, irrespective of whether levels or changes are used, increases the possibility of a forced top executive removal.

**Table 4.12: Base-line Results where Accounting-Based Performance is Measured by Changes instead of Levels, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | All changes | Forced changes | Non-Forced changes |
| $SHR_{t-1}$ | -0.082 | -0.049 | -0.015 |
| | (0.000) | (0.000) | (0.163) |
| $SHR_{t-2}$ | -0.008 | -0.006 | -0.001 |
| | (0.572) | (0.502) | (0.881) |
| $\Delta EBIT_{t-1}$ | -0.168 | -0.106 | -0.010 |
| | (0.006) | (0.003) | (0.765) |
| $\Delta EBIT_{t-2}$ | -0.054 | -0.038 | -0.002 |
| | (0.446) | (0.372) | (0.948) |
| SIZE | -0.001 | -0.000 | 0.000 |
| | (0.656) | (0.846) | (0.820) |
| AGE | 0.004 | 0.000 | 0.003 |
| | (0.000) | (0.882) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 2825 | 2823 | 2823 |
| Pseudo $R^2$ | 0.075 | 0.107 | 0.079 |
| Log Lik. | -785.1 | -411.8 | -515.7 |

**NOTE:** p-values in parentheses

### *4.6.2 Misclassification of MSE Changes*

As already mentioned in Section 4.4 there were 11 cases of Most Senior Executive changes for which information provided was limited. Although, it was clear enough that these departures were non-forced their categorisation as forced remains an issue. Consequently, it may be the case that these changes were misclassified as forced. Model (2) of Table 4.6 was re-run excluding these observations.

As indicated in Table 4.13, baseline results are qualitatively identical. The marginal effect of prior year's stock returns is –0.076 for all changes and –0.040 for forced departures. Both estimates are significant at less than the 1% level. Accounting earnings of the previous year enter with a negative sign of –0.163 for all changes and –0.110 for forced changes and are also significant at conventional levels. Finally non-forced departures are driven mainly by age which enters with a positive sign 0.003 and significant at less than the 1% level.

**Table 4.13: Base-line Results where Ambiguous MSE Departures are Excluded, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | **All changes** | **Forced changes** | **Non-Forced changes** |
| $SHR_{t-1}$ | -0.076 | -0.040 | -0.019 |
| | (0.000) | (0.000) | (0.099) |
| $SHR_{t-2}$ | -0.009 | -0.002 | -0.007 |
| | (0.525) | (0.784) | (0.553) |
| $EBIT_{t-1}$ | -0.163 | -0.110 | 0.002 |
| | (0.004) | (0.001) | (0.943) |
| $EBIT_{t-2}$ | 0.088 | 0.005 | 0.050 |
| | (0.087) | (0.870) | (0.124) |
| SIZE | -0.000 | 0.000 | 0.000 |
| | (0.859) | (0.749) | (0.841) |
| AGE | 0.004 | 0.000 | 0.003 |
| | (0.000) | (0.747) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 2819 | 2817 | 2817 |
| Pseudo $R^2$ | 0.077 | 0.118 | 0.081 |
| Log Lik. | -764.0 | -380.9 | -513.8 |

**NOTE:** p-values in parentheses

### *4.6.3 Relative Measures of Performance*

A final sensitivity analysis was the use of alternative performance measures and in particular, of relative performance measures. As Cyert and March (1963) argue, firms do not only use their own prior performance in deciding whether or not to replace top

executives; they also incorporate the performance of competing firms. Therefore, if the firm's performance is appreciably lower than that of several competitors, the company will replace its top manager more readily than would be the case if the firm was performing similarly to its competitors.

Relative performance measures include: a) prior years' industry adjusted stock returns and b) prior years' industry adjusted accounting returns. The construction of the above measures was discussed in Section 4.4.2. In summary, industry adjusted stock return and accounting earnings equal company's stock return and accounting returns respectively minus the median value of the corresponding measure over the same period for all firms in the primary one-digit SIC industry in which the firm was active at the time of the turnover. Again, the complete Model (2) of Table 4.6 was re-run using the above alternative performance measures. Findings are summarised in Table 4.14.

**Table 4.14: Base-line Results where Relative Performance Measures are Used, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | **All changes** | **Forced changes** | **Non-Forced changes** |
| $RSHR_{t-1}$ | -0.081 | -0.043 | -0.020 |
| | (0.000) | (0.000) | (0.072) |
| $RSHR_{t-2}$ | -0.009 | -0.000 | -0.009 |
| | (0.539) | (0.996) | (0.440) |
| $REBIT_{t-1}$ | -0.182 | -0.128 | -0.000 |
| | (0.002) | (0.001) | (0.990) |
| $REBIT_{t-2}$ | 0.095 | 0.007 | 0.052 |
| | (0.076) | (0.831) | (0.112) |
| SIZE | -0.000 | 0.000 | 0.000 |
| | (0.859) | (0.883) | (0.775) |
| AGE | 0.004 | 0.000 | 0.003 |
| | (0.000) | (0.775) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 2828 | 2826 | 2826 |
| Pseudo $R^2$ | 0.075 | 0.111 | 0.082 |
| Log Lik. | -785.2 | -410.4 | -513.7 |

**NOTE:** p-values in parentheses

As shown, results are qualitatively identical under relative performance benchmarks. The negative association between prior year's industry adjusted stock / accounting returns and the forced turnover likelihood indicates that the dismissal of a top executive is lower when the company outperforms the industry. The result can be compared with the evidence of Morck et al. (1989), who demonstrate that top management is more likely to be replaced when the firm under-performs its industry. Again, there is no association between firm performance and non-forced departures with the exception of prior year's stock returns that enters with a negative sign but significant at only the 10% level.

Interestingly enough, relative performance measures seem to have no significantly different effects when compared with the company's own performance measures. Moreover, industry adjusted performance indicators do not provide additional explanatory power over results presented in Table 4.6. This finding could be broadly compared with that of Warner et al. (1988) who show that two-digit SIC industry return variables are insignificant predictors of the CEO turnover probability. Taken together, the above suggest that either industry performance is not associated with measures used to evaluate managers or that one- and two-digit SIC-code-based measures are noisy.

## 4.7 Concluding Remarks

This chapter has examined top executive turnover in a sample of the top 460 UK companies over the period 1990-1998. It performed a more comprehensive analysis of UK top executive departures than before by recording the changes of not only the company's CEO but also of the company's Executive Chairman and group Managing Director. This is of particular importance in the UK, as the title "CEO" has

comparatively recently been used to signal the top corporate position. Consequently, the current study was able to identify the Most Senior Executive of each company for each year and investigate the determinants of his/her departure. Moreover, the empirical results are based on hand-collected data over a whole decade such that it was possible to discriminate between forced and non-forced departures. The size and quality of the sample allowed the analysis to provide a more powerful test of the turnover-performance association.

The main contribution of this chapter was to extend CEO turnover-performance governance literature (e.g. Huson et al 2001; Dahya et al. 2001) in the following ways. Firstly, it considered the turnover - performance relation and the ranges over which performance had to fall to trigger a changeover event. Consistent with previous studies both in the US and the UK, the econometric evidence revealed a robust inverse relation between top executive turnover and pre-dated firm performance: top executives are dismissed for poor performance. The results suggest that directors use shareholder returns in monitoring and disciplining top managers whilst financial accounting information may also play an important role in the process of internal governance. The likelihood of dismissal for poor performance was only evidenced in companies where there was a forced change. Routine or non-forced changes had no relation to corporate performance.

Secondly, the current chapter examined the range over which Most Senior Executive turnover and performance extended. As reported, an actual Most Senior Executive forced turnover rate in the median deciles of stock performance was only 3%. For poor performance, representing returns of negative 67% to stockholders, the turnover rate

was about 13%. It seems that performance must fall considerably to significantly increase the actual MSE dismissal rate. These findings were also confirmed within the econometric results.

Thirdly, the chapter explored the time series heterogeneity in the MSE turnover-performance relationship. In particular, the focus was whether the MSE dismissal and corporate performance relation had become more negative over time. This could come about due to increased competition and consequent demands on managerial performance. However, the results of empirical analysis failed to identify any strong evidence of a change in the performance relation between 1991 to 1993 and 1994 to 1997. It would appear that the disciplining effect has not become stronger over time.

Finally, the effects of share stakes in the management turnover process were also examined. The results reported show that there is a negative correlation between Most Senior Executive turnover and management equity holdings. On the one hand this might represent entrenchment, the ability of the MSE to resist a job separation, due to his or her ownership stake. On the other hand it may reflect reduced agency costs and less of a need to remove MSEs in companies where the MSE has a large equity stake. The real point though is whether MSEs are replaced for poor corporate performance. The analysis did not generate strong evidence suggesting that MSEs become entrenched at high levels of equity ownership.

Overall, this chapter has added to the governance literature by documenting the circumstances under which poor performance can lead to a top executive job separation. In summary, it is reported that corporate performance has to be particularly bad to force

a top executive job-separation. There is little evidence that managers are disciplined more for poor corporate performance today than in the earlier years. And finally, top executives with large equity stakes are as likely to be fired for poor performance as those with low equity stakes.

Although removing inefficient managers is an important step towards maximising shareholder wealth, a corporate board for example should also be able to initiate major organisational transformations. Indeed, top executive departures are significant economic events that may have considerable organisational consequences. The following chapter addresses these issues by investigating the impact of Most Senior Executive departures on changes in the identities of the remaining top executives and in particular, on the Chairman position.

# CHAPTER 5

# The Determinants of Chairman Turnover

## 5.1 Introduction

The first valuable contribution of this chapter is that, whilst the previous one investigated the determinants of the Most Senior Executive turnover, the focus of the current chapter is the modelling of *Chairman* turnover. This in turn has significant implications for the UK where it is common practice for companies to have both a Most Senior Executive and a Chairman whose role is unique and distinctly different from that of the other company directors in three main ways. Firstly, the Chairman is expected to "set the tone"; i.e. help the directors establish the business strategy. Secondly, the Chairman is expected to "have an eye for the long term"; i.e. be particularly alert when a strategic re-direction is needed. Finally, the Chairman is expected to "blow the whistle", i.e. initiate the replacement of an under-performing CEO (Financial Times, 2001).

Despite its importance, however, the modelling of Chairman turnover is considerably less common in the literature as opposed to CEO turnover or any other non-CEO turnover. In the UK, studies by Franks et al. (1996) and Dahya et al. (1998, 2001) are pioneering attempts to approach the issue. None of these studies, however, provides a comprehensive analysis of Chairman turnover, as this is not the central focus. Accordingly, executive Chairman departures are considered only in the absence of a CEO position. In contrast, the current chapter is the first study in the UK to explicitly

address the Chairman turnover-performance relation where a more inclusive analysis than before is provided. That is the analysis includes both executive and non-executive Chairman positions.

The second very important insight of this chapter is that changes in the identities of top decision-makers, and in particular in the identity of Chairman, may be associated with departures from the Most Senior Executive position. That is, do Chairmen go at the same time as MSEs? An important issue in the organisational literature of leadership and succession has been the events which accompany the changeover. The majority of previous work has concentrated on the relation between CEO departures and subsequent organisational changes such as corporate restructurings and downsizings (Denis and Denis 1995; Kang and Shivdasani 1995; Weisbach 1995; Denis and Serrano 1996; Mulherin and Poulsen 1998). Changes in the composition of the top management team however, as an additional type of organisational transformation, is an aspect that has been largely ignored. Most comparable to the issues addressed in this chapter are only two studies, the first one by Helmich and Brown (1972) and the second one by Schaefer et al. (2000).

This chapter extends prior work on the association between CEO turnover and non-CEO departures in four main ways. Firstly, previous studies cannot determine whether - following CEO turnover - an individual director's departure from the board is voluntary or is the result of pressure from other directors or stakeholders (e.g. Schaefer et al. 2000). In contrast, the richness of the data in this study makes it - for the first time - possible to investigate whether MSE turnover is associated with forced or non-forced

Chairman departure. That is, are Chairmen dismissed when the MSE departs or do they go voluntarily?

Secondly, this study examines the impact of outside succession on the likelihood of Chairman turnover in poorly performing companies and following different types of MSE turnover. This is unique to the literature, which typically estimates a single (positive) parameter that acts as supporting evidence that top executives are replaced when the new CEO is an outsider. However, in this chapter it is evaluated whether: a) doing really badly (stock returns in the lowest decile), and b) whether the departing Most Senior Executive is forced out as opposed to a routine departure has different effects on the Chairman turnover - outside succession relation.

The other two contributions of the chapter refer to methodological advancements over the work of Schaefer and his colleagues (2000). More specifically, it is difficult to draw general inferences from the analysis of Schaefer et al. as it concentrates on a single industry, that of financial institutions. Contrary to their work, the data in this study covers six main industrial groupings and therefore makes it possible to generate more valid inferences. Finally, Schaefer et al. (2000) de-compose the effect of CEO turnover on the likelihood of non-CEO departure by classifying any CEO departure as non-routine if the departing CEO is not aged 64, 65 or 66 years old. Nevertheless, the quality of this study's data - as described in Chapter 3 - allows a more rigorous and comprehensive classification of Most Senior Executive departures.

The data set of this study consists of 309 Chairman departures drawn from the top 460 UK listed companies during 1990-1998. Since both Chairman and MSE turnover are

likely to be linked with firm performance, this study adopts a number of performance metrics (e.g. an indicator for being in the lowest decile of stock returns) in order to control for poor performance and hence, make valid inferences regarding the MSE turnover effect. The analysis yields four main results. Firstly, Chairmen - likewise MSEs - are dismissed for poor performance. This negative association, however, is less strong when compared with that of the Most Senior Executives. Secondly, it is reported that Chairmen are removed when the existing MSE turns over as well and a new one comes in. Thirdly, it appears that Chairman departures are more linked with MSE turnover when the firm's performance is extremely poor or when the departing Most Senior Executive is forced out as opposed to a natural turnover. Finally, there seems to be no strong evidence that outside succession increases further the likelihood of Chairman turnover; the result remains unchanged even when companies perform badly or when the departing MSE is forced out.

The remainder of the chapter is organised as follows. Section 5.2 discusses the conceptual framework behind the determinants of Chairman turnover and develops the hypotheses under study. Section 5.3 highlights the contributions of the current study to existing empirical work. Section 5.4 details the empirical strategy and the variable construction. Section 5.5 addresses a couple of very important methodological issues related to the present research. In Section 5.6 the results are presented and discussed. while a number of additional sensitivity tests are considered in Section 5.7. Finally, Section 5.8 offers some concluding remarks.

## 5.2 Motivation and Hypotheses Development

In the current study, it is argued that there are three potential determinants of changes in the composition of top management teams and in particular in the Chairman position. These are: a) firm performance, b) changes at the Most Senior Executive position, and c) the type of succession. This section reviews why the above factors are expected to affect Chairman turnover.

### *5.2.1 The Chairman's Monitoring*

As mentioned in the previous chapter, the effectiveness of internal monitoring mechanisms can be assessed by evaluating the link between firm performance and the removal of the Most Senior Executive. Chairman turnover, however, can also be used as a measure of top management changes. This is of particular importance in the UK where the role of the Chairman is unique and distinctly different from that of the other company directors for three main reasons.

Firstly, the Chairman is the one who "sets the tone". The directors are responsible for establishing the business strategy and ensuring that the chief executive knows what he is doing. They, however, cannot do that job effectively if they do not receive crucial information the successful exchange of which is the Chairman's responsibility (Financial Times, 2001). Secondly, the Chairman is the one who "must have an eye for the long term". It is he who carries the highest responsibility for the company's strategy, decisions and actions among the company's directors. Furthermore, the Chairman – above all - must be particularly reflective and strategic when a change in direction is needed, or when the company's performance is deteriorating (Financial Times, 2001).

Finally and most importantly, the Chairman is the one who must "blow the whistle" when there is a need to replace an under-performing CEO. In the UK the proportion of non-executive directors on the board, with a higher profile and better rewards, is lower compared with other countries such as the US. As a result, it is the Chairman that bears most of the responsibility for CEO monitoring (Financial Times, 2001). Overall, the Chairman's role is distinctively different from that of the rest directors because: a) he - after the CEO - is the one who bears the largest responsibility for the company's economic health, and b) he - above all other directors - is the one to be held most accountable for the CEO's monitoring.

But who will monitor the monitor? Like the CEO, the Chairman himself is assumed to be continuously assessed and monitored by the various internal disciplining mechanisms and in particular by the full board of directors. Consequently, an investigation of the Chairman turnover-performance association and in particular, the comparison between forced and non-forced Chairman departures represents another very good test of the competency of these monitoring devices. This chapter expands the investigation of the poor-performance hypothesis where the dependent variable is now Chairman turnover. This in turn is less common in the literature, which most often models CEO turnover. Hence:

*H1: If internal monitoring mechanisms are effective there should be a negative relation not only between the turnover probability of the Most Senior Executive and firm performance but also between the turnover likelihood of his monitor, i.e. the Chairman, and firm performance.*

### *5.2.2 CEO Turnover and Organisational Changes*

CEO changes are very important economic events as they signal potential performance improvements as well as major operational, structural and strategic transformations. The importance of CEO turnover depends, therefore, on the extent to which it leads to real changes in the firm in which it occurs such as the divestitures of unprofitable acquisitions, employee layoffs, good replacement decisions or even other non-CEO changes. The issue of major organisational changes following the CEO changeover event has attracted considerable attention from organisational theorists.

Specifically, the belief that a new CEO will initiate major policy shifts is frequently espoused in the financial press and often labelled the "common-sense" or "great person" theory of executive succession (Guest 1962; Reinganum 1985). According to the above argument, leaders make a difference – they have discretion and influence –and the arrival of a new manager in the top office may result in good possibilities for subsequent organisational changes. A new CEO, therefore, will most likely avoid some of his/her predecessor's mistakes and signify important changes in the policies and strategies of the firm. This chapter argues that changes in the identities of other members of the top management team may provide a critical variable by which to evaluate the link between CEO turnover and organisational transformation.

Indeed, non-CEO departures may yield valuable insight into the mechanisms by which organisational changes (e.g. selling of unprofitable acquisitions, downsizings etc.) are implemented. That is, if CEO departures are related with other organisational changes how are these changes implemented? Do new CEOs implement changes by re-directing existing managers to adjust their strategies and actions, perhaps by changing the ways in

which performance of those managers is measured and rewarded? Or is organisational change difficult to implement with the pre-existing management team, necessitating changes in the identities of the firm's remaining top decision makers as well?

In this case, the replacement of other top managers may enable the new CEO to: a) get rid of those old lieutenants who appear to be shirking their duties, b) to hire new lieutenants who are loyal to the successor, and c) to weaken those in company's broader management team who might oppose the leader's new policies. In general, as Helmich and Brown (1972, p.371) summarise "the use of strategic replacements empowers the new manager to form a new informal social circle, which revolves about himself and supports his own status and policies".

Consequently, departures from the firm's remaining top positions in the period surrounding CEO turnover can be another important organisational change. This is particularly true for the Chairman position, whose role as mentioned in the previous section, is both very different from that of the rest executive management team and very important for the company's success. Moreover, the Chairman may be one of those old lieutenants that is particularly aligned with the departing CEO and therefore, he - above all other directors - must be replaced. In this case, Chairman departures - initiated either by internal monitoring mechanisms (e.g. board of directors) and/or by the new CEO - is believed to be a vital necessity for the successful implementation of the company's new programme. Hence, it is predicted that:

*H2: There should be a positive association between concurrent or subsequent Chairman departures and Most Senior Executive turnover.*

An important implication of the above arguments is that organisational restructurings are especially needed following poor firm performance. Some authors have argued that top management departures (other than the CEO) are an essential ingredient of turnaround strategies. Starbuck and Hedberg (1977, p.256), for example, contend that "top management as a group must be replaced for a turnaround strategy to succeed". Similarly, Hofer (1980, p.25) argues that "a precondition for almost all successful turnarounds is the replacement of the current top management of the business in question". In other words, the establishment of new policies, the implementation of major transformation plans and the shake-up of existing management teams are particularly needed in those firms that exhibit deteriorating performance. Hence, it is predicted that:

*H3: The positive correlation between Chairman departures and MSE turnover is expected to be more pronounced in the poorly performing companies.*

Moreover, the impact of CEO turnover on subsequent changes can be largely dependent on the circumstances surrounding the predecessor CEO's departure and its potential for organisational disruption. Accordingly, forced removal is argued to be significantly disruptive to organisational routines and processes when compared to a natural turnover. Indeed, the process by which chief executives are fired is a complex event characterised by significant political interactions between internal managers, directors, and outside interests such as investors and the media (Hirsch 1986; Ocasio 1994).

Although organisational consequences of CEO turnover are predicted to be more severe if the departing CEO is forced out, the relation between Chairman turnover and *forced*

CEO changes is more controversial. On one hand, a highly effective Chairman who monitors the top management team and replaces an under-performing CEO is less likely to leave, precisely because he has done the monitoring job remarkably well. However, on the other hand, a poorly performing CEO – reflected in poor returns to shareholders – suggests that the Chairman was not doing his job properly and therefore, he needs to be replaced as well.

Hence, although it is widely argued that forced CEO turnover may cause larger organisational changes the *existence* of a Chairman turnover-*forced* CEO departure relation *per se* is open to debate. Of course, if such an association is evident, then it could be argued that forced CEO turnover might have a stronger impact on the Chairman change likelihood than non-forced CEO turnover. This study contributes to the above debate by examining the following hypothesis:

*H4: The positive correlation between Chairman departures and MSE turnover is expected to be more pronounced if the departing MSE is forced out.*

### *5.2.3 CEO Succession and Organisational Changes*

Whilst CEO turnover may be associated with subsequent organisational changes, the successor's origin may also have an effect on the existing administrative patterns and resource allocations. It is argued that turnover and succession are two processes that fundamentally intertwine and interact together in affecting subsequent firm outcomes. Indeed, Gephart (1978, p.554) recognised the theoretical importance of this linkage in his ethnography on leadership succession when he wrote: "Successions in organisations may be defined as the process whereby the particular incumbent of such a position

changes. Succession therefore involves changes in the status of two or more persons, the predecessor and the successor". Consequently, the impact of CEO turnover on the composition of the top management team can vary depending on the succession type.

A review of the literature on the subject of succession results in two basic lines of thought. According to the *adaptive* or *rational* view, outside candidates are perceived to be more capable of changing the mission, objectives, and strategy of an organisation than insiders. There are two reasons behind this argument. Firstly, outsiders are more able to objectively evaluate the firm's existing strategies and initiate appropriate changes as they were not personally involved in the selection of those strategies; that is, outsiders are less invested in the company's status quo (Starbuck et al. 1978; Bibeault 1982; Goodstein & Boeker 1991; Miller 1991). Secondly, outsiders are more likely to perceive a need for change, as they are unlikely to recognise or even more to accept the implicit agreements and understandings that exist among the firm's employees and between the former and external stakeholders; that is outsiders are unencumbered by political baggage (Faith et al. 1984; Romanelli & Tushman 1988; Vinary et al. 1992). In both cases, the outsider is expected to take major strategic decisions, such as capital allocations, and in turn to take decisions that will enable him to carry out his new plans, such as changes to the firm's existing management team.

According to the *inertial* view, however, the outside succession effectiveness could be limited by social and environmental constraints. In other words, although environments are dynamic, firms- and particularly large ones- tend to resist changing mainly because of their complexity, the large number of persons and the variety of vested interests involved. Under this view, the outsider is representative of outside authority but can

count on little direct support from the internal management which feels maligned because of the disruption to organisational routines and the breaking of implicit contracts inherent to the executive tournament process. Consequently, the outsider CEO is likely to be out-numbered and over-whelmed by the structural defences available to the internal management team that they are able to neutralise the outsider's efforts. For example, major transition programmes, or more importantly top management replacements recommended by an outside CEO may work their way up through a large bureaucracy and then require the approval of a group of top executives and/or various stakeholders rather than just one individual. As a result, outside executives may not be able to promote change or creativity (Child 1972; Lieberson & O'Connor 1972; Hannan & Freeman 1984). This chapter contributes to the above debate by examining the following hypothesis:

*H5: There should be a positive association between Chairman departures and Most Senior Executive outside succession.*

Similarly to CEO turnover, the effect of outside succession - if any - is expected to be more prominent in the case of poorly performing companies. It is in these cases that the firm wants to institute fundamental changes in how it operates and hence, outside appointments are more needed, as they regarded more likely to introduce and carry out such changes (Hofer 1980, Vinary et al. 1992). In fact, it is in these cases that may be easier for the outsiders to promote the replacement of some of the company's top managers. Hence hypothesis five is further explored as follows:

*H6: The positive correlation between Chairman departures and MSE outside succession is expected to be more pronounced in the poorly performing companies.*

As highlighted in the previous section, forced termination of a CEO's employment creates the greatest organisational disruption since it interrupts the natural succession process. Forced departures, when combined with outsider succession however, create both a mandate for organisational change and the potential to realise this mandated change. As Vancil (1987) emphasises, this is considered the most disruptive type of organisational transition and the turnover with the strongest prospect for organisational change. Hence, it is predicted that:

*H7: The positive correlation between Chairman departures and MSE outside succession is expected to be more pronounced if the departing MSE is forced out.*

## 5.3 Contributions to Research

This section summarises prior empirical studies - which were extensively reviewed in Chapter 2- paying particular focus at their limitations. The contributions of the current study are then elaborated.

The substantive literature examining the turnover-performance relation focuses on CEO departures. A limited number of studies use non-CEO turnover as a broader indicator of a top management change (e.g. Warner et al. 1988; Denis and Denis 1995; Mikkelson and Partch 1997). In the UK, Franks et al. (1996) report a higher incidence of Chairman turnover in poorly performing companies than in average performing companies. They do not, however, perform any regression analysis to investigate the relation between

Chairman turnover and firm performance. More recently, Dahya et al. (1998, 2001) document a negative association between firm stock performance and top management changes at the positions of Chairman. Changes at the Chairman level, however, are not the main research theme, as they are considered only when the company has no CEO. As a result, only e*xecutive* Chairman departures are included.

Accordingly, the current chapter is the first study in the UK whose central focus is the explicit modelling of Chairman turnover where the latter is an entirely separate position from that of the Most Senior Executive. That is, the analysis concentrates on those Chairmen who are not the company's leading executive[22]. Moreover, the current chapter is the first study in the UK that provides a more inclusive analysis of Chairman turnover than before. That is the analysis concentrates on both e*xecutive and non-executive* Chairman positions.

Furthermore, a number of studies explores the organisational consequences of CEO turnover (e.g. Weisbach 1995; Denis and Serrano 1996; Mulherin and Poulsen 1998 etc.). None of these studies, however, links CEO changes with other top executive departures. The only exception is a paper written by Schaefer, Hayes and Oyer (2000). Schaefer and his colleagues model departures at the top four executive positions as a function of firm performance and CEO changes. Based on a sample of 1,266 U.S. banks and thrifts over the period 1990-1999 they document a significant positive correlation between CEO turnover and departures from non-CEO positions, such as the Chief Operating Officer and the Chief Financial Officer.

[22] Note that in Chapter 4 the Most Senior Executive was taken to be the executive Chairman if a CEO role did not exist.

Consistent with Hypotheses 3 and 4 developed in the previous section, Schaefer and his colleagues (2000) document that non-CEO and CEO turnover are more strongly linked when firm performance is poor whilst non-CEO turnover is not significantly impacted if the previous CEO's departure is routine. The latter finding contrasts, however, with the conclusions reached by Denis and Denis (1995) who report that both forced resignations and normal retirements exhibit a substantial amount of post-turnover corporate restructuring.

The issue of outside succession was first addressed by Helmich and Brown (1972) who drawn on a sample of 208 President departures during 1959-1969 report that companies experiencing outside succession tend to be associated with a higher rate of other top management changes. Schaefer et al. (2000) report that the likelihood of a non-CEO turnover is 16 percentage points higher when the CEO turns over and is replaced by an outsider. Nevertheless, results on outside CEO succession within different turnover contexts (e.g. good versus bad firm performance or forced versus natural CEO departure) are particularly sparse and inconclusive.

On one hand, it is reported that outside successions are more likely following poor performance, as it is in times of crisis that new policies are more needed and outsiders are regarded better qualified for their successful implementation. (Warner et al 1988; Parrino 1997; Huson et al. 2001). On the other hand, Dalton and Kesner (1985) find no support for the hypothesis that poor organisational performance increases the likelihood of outside selection while Kang and Shivdasani (1995) report that outside appointments occur only if earnings performance is extremely poor. Finally, Clayton et al. (2000) and Rosenberg (2000) and Khurana and Nohria (2000) document that outsider appointments

replacing forced CEOs result in greater performance improvements and organisational restructurings. In contrast, Kang and Shivdasani (1995) conclude that the likelihood of outside appointments does not appear to be influenced by whether the departure of the CEO is forced, suggesting that outsiders are not perceived as more effective in promoting change even when this is greatly needed.

It is obvious, therefore, that the association between Chairman departures and CEO turnover / succession is, despite its importance, not only extremely under-researched but also open to considerable debate. The current analysis contributes to this area by extending the pioneering work of Schaefer et al. (2000) in four main ways.

Firstly, it provides a more comprehensive analysis of the determinants of Chairman turnover than hitherto by not only documenting a positive association between the former and MSE departures but also by identifying whether Chairmen voluntarily depart or are forced to resign. Secondly, it furthers prior research on the impact of outside succession on the likelihood of Chairman turnover by investigating the relation for the worst performing companies and following different types of the Most Senior Executive departure. This is unique to the literature. Finally, the richness of the data enables two methodological advances. In particular, this analysis provides a more rigorous test of the effect of different types of MSE departures on Chairman turnover by constructing the forced and non-forced MSE turnover variables in a such a way (as described in Chapter 3) that do not suffer from considerable measurement errors as in the case of Schaefer et al. (2000) whose classification of *all* CEO departures is based on the age variable and only. And, in contrast with Schaefer et al. (2000) whose results cannot be easily generalised because they are drawn on the banking industry and only,

the use of data across six main industry sectors in this study allows the generation of inferences that have a wider applicability.

Overall, the current chapter is the first study in the UK (and one of the very few generally) to explicitly consider the determinants of Chairman turnover. This is a very important contribution, especially for the UK, where the Chairman's duties are unique and greatly associated with the monitoring of the CEO.

## 5.4 Data and Model Estimation

This section details the sample on which the current study was based, the empirical model adopted and the construction of the variables. A number of descriptive statistics is given whereas certain comparisons between Chairman turnover and Most Senior Executive turnover are also made.

### *5.4.1 The Data Set*

Likewise Chapter 4 this chapter was based on the top 460 UK listed companies. The focus of the analysis now, however, is the departures from the Chairman position as opposed to Most Senior Executive changes. The total number of firm-year observations included is 2180.

### *5.4.2 The Econometric Model*

Since the dependent variable is a dichotomous one and for the same reasons explained in Chapter 4, the following Probit model was estimated where $\Phi$ is the standard cumulative normal distribution with zero mean and unit variance:

$$Pr\ (y_i \neq 0 / x_i\beta)=\Phi\ (x_i\beta)$$

The term y is an indicator variable relating to the probability of Chairman turnover. A zero (0) indicates a negative outcome whereas a one (1) represents a positive outcome. The x matrix contains proxies for stock-based and accounting-based company performance, the likelihood of Most Senior Executive departure, the succession type, company size, and Chairman age. More details on both the left-hand side and the right-hand side variables are given below. Note that those variables that have already been used in the previous chapter (i.e. firm performance, size and age) are briefly discussed.

***The LHS variables***

The basic dependent variable in this chapter is whether the Chairman departs from the company or not. In particular, regression analysis was carried out for all three definitions of a Chairman change: a) all Chairman changes, b) forced Chairman changes, and c) non-forced Chairman changes. A zero (0) indicates a negative outcome, whereas a one (1) represents a positive outcome, i.e. if the Chairman is not disclosed in the firm's top management team in year t+1.

As highlighted in Chapter 4, the Most Senior Executive of each company was taken to be the CEO or the executive Chairman - if no CEO existed - or the group Managing Director. Since the central focus of this chapter is the modelling of Chairman turnover where the latter is a distinctively separate role of the MSE, the current analysis excluded those Chairmen who are the company's leading executive (i.e. they are executive Chairmen and there is no CEO). Moreover, as reported in Chapter 3, in some cases the

Chairman and CEO or MD positions are combined in a single individual. As a result, if the Most Senior Executive (i.e. CEO or MD) departs so does the Chairman. This combination of roles, therefore, creates an automatic positive correlation between MSE and Chairman departures. In order to avoid this mechanical increase in the turnover measure, the current analysis excluded those Chairmen who have combined roles, i.e. they hold the title of CEO or group MD as well. The above process resulted in 2180 Chairmen who are not the company's top manager and do not hold any other position. Furthermore, as emphasised, the Chairman positions included in the analysis can be either executive or non-executive. In fact, the majority of the Chairmen are non-executives (68%).

All Chairman departures were then grouped into forced and non-forced according to the classification process described in Chapter 3. The number of firm observations, all, forced, and non-forced Chairman changes by year and by type of position (i.e. executive vs. non-executive) is presented in Table 5.1. As shown, there were in total 309 Chairman changes. The average total turnover of Chairmen is slightly higher than that of the Most Senior Executives (14.2% as opposed to 9.4%, see Table 4.1). More interestingly, the forced turnover rate for MSEs is almost twice that of Chairmen (4% as opposed to 2.2%). The classification process resulted in 48 forced departures and 255 non-forced ones (a total of 303 observations)[23].

[23] There were six Chairman departures for which no information was found; these observations were excluded from the construction of the forced and non-forced samples.

**Table 5.1: Sample Firms, All, Forced and Non-Forced Chairman Changes by Year and by Type of Position, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Year | Number of firms | All changes | | | Forced changes | | | Non-Forced changes | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | E | N | T | E | N | T | E | N | T |
| 1990 | 165 | 5 (3.0%) | 8 (4.9%) | 13 (7.9%) | 2 (1.2%) | 0 (0.0%) | 2 (1.2%) | 3 (1.8%) | 6 (3.7%) | 9 (5.5%) |
| 1991 | 174 | 14 (8.0%) | 14 (8.0%) | 28 (16.0%) | 5 (2.9%) | 3 (1.7%) | 8 (4.6%) | 8 (4.6%) | 11 (6.3%) | 19 (10.9%) |
| 1992 | 215 | 14 (6.5%) | 15 (7.0%) | 29 (13.5%) | 3 (1.4%) | 1 (0.5%) | 4 (1.9%) | 11 (5.1%) | 14 (6.5%) | 25 (11.6%) |
| 1993 | 240 | 15 (6.3%) | 19 (7.9%) | 34 (14.2%) | 2 (0.8%) | 3 (1.3%) | 5 (2.1%) | 13 (5.4%) | 16 (6.7%) | 29 (12.1%) |
| 1994 | 259 | 13 (5.0%) | 36 (13.9%) | 49 (18.9%) | 3 (1.2%) | 7 (2.7%) | 10 (3.9%) | 10 (3.9%) | 29 (11.2%) | 39 (15.1%) |
| 1995 | 276 | 17 (6.2%) | 23 (8.3%) | 40 (14.5%) | 4 (1.4%) | 4 (1.4%) | 8 (2.8%) | 13 (4.7%) | 18 (6.5%) | 31 (11.2%) |
| 1996 | 284 | 10 (3.5%) | 29 (10.2%) | 39 (13.7%) | 3 (1.0%) | 3 (1.1%) | 6 (2.1%) | 7 (2.5%) | 25 (8.8%) | 32 (11.3%) |
| 1997 | 283 | 12 (4.2%) | 36 (12.8%) | 48 (17.0%) | 2 (0.7%) | 1 (0.4%) | 3 (1.1%) | 10 (3.5%) | 34 (12.0%) | 44 (15.5%) |
| 1998 | 284 | 3 (1.1%) | 26 (9.1%) | 29 (10.2%) | 0 (0.0%) | 2 (0.7%) | 2 (0.7%) | 3 (1.0%) | 24 (8.5%) | 27 (9.5%) |
| **Total** | **2180** | **103 (4.7%)** | **206 (9.5%)** | **309 (14.2%)** | **24 (1.1%)** | **24 (1.1%)** | **48 (2.2%)** | **78 (3.6%)** | **177 (8.1%)** | **255 (11.7%)** |

**NOTE:** E: Executive, N: Non-executive, T: Total

An analysis of Chairman departures by type of position indicates that non-executive Chairmen are more likely to leave office than their executive counterparts; total turnover rates are 9.5% and 4.7% respectively. Moreover, a break-down of executive and non-executive Chairman changes into forced and non-forced reveals that the above observed difference in the total turnover rates is driven mainly by the latter type of departure. In particular, although both types of Chairmen are equally likely to be forced out (turnover rate is 1.1% in both cases), non-executive Chairmen tend to voluntarily leave office more often than the executive ones (turnover rates are 8.1% and 3.6% respectively). Bearing in mind that the majority of non-forced departures are due to retirement or normal succession (see Table 5.2) the latter finding may simply reflect the increased rate of retirements among non-executive Chairmen. This in turn, could be attributed to the fact that non-executive Chairmen tend to be older directors with

(possibly) less responsibilities due to their part-time role; consequently their departure is mandatory whilst their replacement may be easier compared with that of executive Chairmen.

Table 5.2 presents the reasons given by companies for the job separation as well as the number of forced and non-forced Chairman departures by reason. The comparison of the Chairman turnover sample with that of the Most Senior Executive reveals a couple of very interesting observations.

**Table 5.2: Forced and Non-Forced Chairman Changes by Stated Reason as Reported in the Financial Times, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Reasons | Forced changes | Non-Forced changes | Total |
|---|---|---|---|
| Retired and left board | 16 | 161 | 177 |
| Retired and stayed on board | 1 | 22 | 23 |
| Normal succession | 0 | 12 | 12 |
| Death | 0 | 10 | 10 |
| Health/Illness | 0 | 5 | 5 |
| Policy/Personality disagreement | 5 | 0 | 5 |
| Poor performance | 5 | 0 | 5 |
| Personal reasons/Other interests | 2 | 4 | 6 |
| Take position in another firm | 0 | 3 | 3 |
| Fired | 0 | 0 | 0 |
| Assume other position in firm | 0 | 0 | 0 |
| Take-over/Merger | 0 | 9 | 9 |
| De-merger | 0 | 0 | 0 |
| Scandal | 3 | 0 | 3 |
| Other | 6 | 15 | 21 |
| No clear reason reported | 8 | 0 | 8 |
| Limited Information | 2 | 14 | 16 |
| **Total** | **48** | **255** | **303** |

Firstly, the number of forced Chairman departures is significantly lower than that of forced MSE departures, i.e. 48 (15.8% of total departures) as opposed to 135 (42.8% of

total departures). In contrast, non-forced Chairman departures are approximately 84% of the total departures whereas 57% of MSEs voluntarily leave their office (see Table 4.2). Secondly, Table 5.2 reports that only 5 Chairmen were dismissed because of poor performance whereas poor performance resulted in the removal of 47 Most Senior Executives (see Table 4.2). Taken together the findings in Tables 5.1 and 5.2, it is suggested that Most Senior Executives are more readily dismissed for poor performance than Chairmen, since the former are the ones to be held mostly accountable for the company's economic health. Finally, Table 5.2 demonstrates that the majority of Chairman departures are due to retirement and normal succession (about 70%) justifying thus, the large number of non-forced Chairman departures.

***The RHS variables***

The discussion in Section 5.2 highlighted a number of financial and non-financial variables, which can potentially explain the variation in the possibility of Chairman turnover. The following variables were thus included in the analysis (variable codings in parentheses):

a) Firm Performance: this was measured by stock returns (SHR), i.e. an annual log of company return index, and accounting returns (EBIT), i.e. the return of accounting earnings before interest and tax on total assets employed. Again, lagged instead of current performance measures were used.

b) MSE departure at year t ($MSE_t$) is a dichotomous indicator equal to one (1) if the Most Senior Executive departs at year t (i.e. the same year as the Chairman) and

hence, is not disclosed in the firm's top management team in year t+1 and zero (0) otherwise.

c) MSE departure at year t-1 ($MSE_{t-1}$) is a dichotomous variable equal to one (1) if the Most Senior Executive departure took place in the previous year (i.e. t-1) and zero (0) otherwise.

d) Forced MSE turnover at year t (MSE $Forced_t$) equals to one (1) if the Most Senior Executive is forced out in year t and hence is not disclosed in the firm's top management team in year t+1 and zero (0) otherwise.

e) Non-Forced MSE turnover at year t (MSE $Non\text{-}Forced_t$) equals to one (1) if the Most Senior Executive departs voluntarily in year t and hence is not disclosed in the firm's top management team in year t+1 and zero (0) otherwise.

f) Similarly to previous studies (Parrino 1997; Schaefer et al. 2000; Huson et al. 2001) outside succession (OUTSIDE) equals to one (1) if the new Most Senior Executive has been with the firm for a year or less at the time of the succession announcement and zero (0) otherwise.

g) Outside succession following a forced MSE departure at year t (OUTSIDE $Forced_t$) is a dichotomous variable equal to one (1) if the new Most Senior Executive is an outsider and replaces a dismissed top executive and zero (0) otherwise.

h) Outside succession following a non-forced MSE departure at year t (OUTSIDE Non-Forced$_t$) equals to one (1) if the new Most Senior Executive is an outsider and replaces a top executive who voluntarily leaves office and zero (0) otherwise.

i) The log of the company market value was used to construct size (SIZE) whilst Chairman birth dates were used to calculate their age (AGE). Both metrics were incorporated as control variables.

Descriptive statistics of the study's continuous independent variables are provided in Table 5.3. The mean values of company shareholder returns and accounting returns are 0.059 and 0.106 respectively. The mean company market value is about £2106m. Finally, the average Chairman age is 61.3, which is significantly higher than that of the Most Senior Executives (53.6, see Table 4.3). The latter observation can be attributed to the fact that the majority of the Chairmen included in this analysis are non-executives, who tend to be older than executive directors.

**Table 5.3: Summary Statistics of Continuous Independent Variables, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Variable | Observations | Mean | Std. Dev. | Min. | Max. |
|---|---|---|---|---|---|
| SHR | 2115 | 0.059 | 0.405 | -3.367 | 1.760 |
| EBIT | 1915 | 0.106 | 0.127 | -1.217 | 1.289 |
| MV | 2170 | 2106.50 | 4462.92 | 0.28 | 74902.88 |
| SIZE (log MV) | 2170 | 6.61 | 1.452 | -1.272 | 11.22 |
| AGE | 2167 | 61.30 | 6.29 | 37 | 84 |

Table 5.4 reports descriptive statistics on all and forced MSE turnover included in the current analysis as well as the successor origin per year and per company. In total there were 221 Most Senior Executive departures in the sample out of which almost half were

forced (46.1%). Moreover, 38.4% of all Most Senior Executive departures were followed by an outside appointment whilst half of these outsiders replaced a dismissed Most Senior Executive (50.5%).

**Table 5.4: All and Forced MSE Changes, All Outside Successions and Outside Successions Following Forced MSE Turnover by Year, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Year | All MSE changes | Forced MSE changes | Outside successions | Outside successions-Forced MSE |
|---|---|---|---|---|
| 1990 | 16 (9.7%) | 6 (3.6%) | 4 (2.4%) | 2 (1.2%) |
| 1991 | 27 (15.5%) | 13 (7.5%) | 10 (5.7%) | 5 (2.9%) |
| 1992 | 22 (10.2%) | 10 (4.7%) | 7 (3.3%) | 2 (0.9%) |
| 1993 | 22 (9.2%) | 9 (3.8%) | 8 (3.3%) | 4 (1.7%) |
| 1994 | 25 (9.7%) | 10 (3.9%) | 9 (3.5%) | 4 (1.5%) |
| 1995 | 36 (13.0%) | 18 (6.5%) | 14 (5.1%) | 9 (3.3%) |
| 1996 | 35 (12.3%) | 14 (4.9%) | 13 (4.6%) | 6 (2.1%) |
| 1997 | 31 (11.0%) | 19 (6.7%) | 16 (5.7%) | 10 (3.5%) |
| 1998 | 7 (2.5%) | 3 (1.1%) | 4 (1.4%) | 1 (0.4%) |
| **Total** | **221 (10.1%)** | **102 (4.7%)** | **85 (3.9%)** | **43 (2.0%)** |

Finally, Table 5.5 presents all the possible combinations between the various types of Chairman and Most Senior Executive departures. Numerous observations can be made based on this table, the most important of which are summarised as follows. First of all, out of the 221 cases in which the MSE departs the Chairman also turns over in 47 cases (21%), out of the 102 cases in which the MSE is forced out the Chairman also leaves in 29 cases (30%), and out of the 117 non-forced MSE changes the Chairman also goes in 18 cases (15%). Hence, there seems to be a tendency for the Chairman and the MSE to leave office together; in addition, it is more likely for a Chairman to depart when the MSE is ousted than when he voluntarily turns over. Secondly, out of the 47 total simultaneous departures, in 17 cases the Chairman is forced whilst in 30 cases he leaves on his/her own will. Finally, it seems that Chairmen are as likely to be forced out as to

voluntarily depart when the MSE is ousted; out of 102 total MSE forced changes, in 15 cases the Chairman is also ousted (15%) whereas in 14 cases it his/her decision to leave (14%).

**Table 5.5: Alternative Scenarios of Chairman and Most Senior Executive Changes, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Chairman | No Change | All | MSE Forced | Non-Forced | Total |
|---|---|---|---|---|---|
| **No Change** | 1697 | 174 | 73 | 99 | 2043 |
| **All** | 262 | **47** | **29** | **18** | 356 |
| **Forced** | 31 | **17** | **15** | 2 | 65 |
| **Non-Forced** | 225 | **30** | **14** | 16 | 285 |
| **Total** | 2215 | 268 | 131 | 135 | 2749 |

## 5.5 Specification Issues

Prior to the main analysis, it is worth addressing one important specification issue relevant to interpreting research findings in this area. That is, the endogeneity of the MSE turnover.

Chapter 4 established empirical support for the following general model of Most Senior Executive turnover:

$$\Pr(MSE\,Turnover_{it}) = f(Firm\,Performance_{it-1} + ...) + \varepsilon_{it} \quad \text{(a)}$$

Moreover, a number of papers (e.g. Kang and Shivdasani 1995; Parrino et al. 1997; Huson et al. 2001) suggest the following broad model of outside succession:

$$\Pr(Outside\ Succession_{it}) = f(Firm\ Performance_{it-1} + ...) + \varepsilon_{it} \quad \text{(b)}$$

The current chapter investigates the impact of firm performance, MSE turnover and outside succession on the likelihood of Chairman departure. This suggests the following general model of Chairman turnover:

$$\Pr(Chair\ Turn_{it}) = f(MSE\ Turn_{it} + Outside\ Succession_{it} + Performance_{it-1} + ...) + \varepsilon_{it} \quad \text{(c)}$$

Equations a) and c) illustrate the relation among firm performance, MSE turnover, and Chairman turnover whilst equations b) and c) illustrate the relation among firm performance, outside succession and Chairman turnover. Since the issue considered here is broadly the same for both sets of equations the discussion will focus on one of them.

Accordingly, equations a) and c) show that Chairman turnover and MSE turnover are jointly dependent on firm performance. Consequently, a positive correlation between MSE turnover and Chairman changes can be due to one of two reasons. Firstly, according to the theoretical discussion in Section 5.2 a poorly performing CEO suggests that the Chairman must also be replaced since he failed to successfully perform his job. Secondly, since firm performance and MSE turnover are negatively associated (as indicated in this study and other previous ones) and firm performance and Chairman turnover are also negatively correlated (as will also be indicated in this study), then MSE turnover and Chairman departures are likely positively correlated. This positive association between MSE turnover and changes at the Chairman position, however, may result because MSE turnover is a proxy variable for firm performance, and not because

of the outgoing Most Senior Executive. Consequently, in order to get an unbiased estimate on the MSE turnover variable, it is very important to appropriately control for the effect of firm performance. Moreover, the challenge here is to define the measure of overall firm performance assumed to influence both Chairman and MSE turnover. The current study attempts to deal with this issue in Section 5.6.1.

In a similar vein, the cause and effect relationship in equation c) is not clear. This study argues that departures from the Most Senior Executive position may lead to Chairman changes. It could be, however, the case that if the Chairman of the company leaves – and this is a sign of no confidence in the leadership of the executive team – the CEO of the company will also leave his post. The issue was explored by regressing MSE turnover on Chairman changes. As expected, if the Chairman of the company departs there is an increase in the Most Senior Executive turnover likelihood; marginal effects are positive and significant under all and forced MSE changes. Therefore, one can make inferences regarding only the *association* and not the *causation* between MSE turnover and Chairman changes.

## 5.6 Results and Interpretations

The econometric results regarding the determinants of Chairman departures are presented in Tables 5.6-5.10. To put the study's results in economic perspective and similarly to Chapter 4, the marginal effects rather than the coefficient estimates of the probit models are presented. All probit models include dummies for industry and time effects. Note that A denotes all Chairman departures whereas F and NF stand for forced and non-forced Chairman changes respectively. Finally, p-values are reported in parentheses.

This section starts with the investigation of the poor-performance hypothesis in the context of Chairman turnover whilst it engages a discussion as to how to control for firm performance more appropriately. It then looks at the two other important predictors of the Chairman turnover probability, namely departures from the Most Senior Executive position and outside succession. Finally, it concludes by exploring the above relations firstly for the worst performing companies, and secondly under alternative MSE turnover scenarios.

### *5.6.1 Chairman Turnover and Firm Performance*

The results on the association between Chairman turnover and prior firm performance are presented in Table 5.6. As shown, there is no relation between performance and the probability of Chairman turnover in general. That is mainly because the majority of the changes involved are non-forced (84%). However, declining shareholder returns are associated with increased forced Chairman turnover. In particular, a marginal decrease in prior year's shareholder returns increases the possibility of a forced Chairman departure by 1.7 percentage points; this estimate is significant at less than the 5% level. In addition to prior year's shareholder returns, evidence reveals that board of directors use further lags of performance in their decision to replace the Chairman. The second lag of stock returns enters with a negative sign (-0.015) and is significant at the 10% level. Accounting-based performance, however, is not associated with the likelihood of forced Chairman departures.

**Table 5.6: Estimates of Probit Models Relating Chairman Turnover to Stock-Based and Accounting-Based Performance, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | **All changes** | **Forced changes** | **Non-Forced changes** |
| $SHR_{t-1}$ | -0.028 | -0.017 | 0.005 |
| | (0.277) | (0.015) | (0.810) |
| $SHR_{t-2}$ | -0.037 | -0.015 | -0.015 |
| | (0.151) | (0.068) | (0.503) |
| $EBIT_{t-1}$ | 0.054 | 0.005 | -0.008 |
| | (0.503) | (0.843) | (0.890) |
| $EBIT_{t-2}$ | 0.021 | -0.030 | 0.141 |
| | (0.817) | (0.281) | (0.043) |
| SIZE | 0.006 | 0.002 | 0.004 |
| | (0.319) | (0.383) | (0.458) |
| AGE | 0.009 | -0.000 | 0.011 |
| | (0.000) | (0.056) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 1834 | 1828 | 1828 |
| Pseudo $R^2$ | 0.049 | 0.088 | 0.079 |
| Log Lik. | -748.5 | -195.8 | -636.9 |

**NOTE:** p-values in parentheses

In contrast with forced turnover, there is no relation between performance and the possibility of a non-forced Chairman departure (with the exception of the second lag of accounting returns that appears, however, to be positive). Similarly to MSE departures, non-forced Chairman departures are driven mainly by age that enters with a positive sign (0.011) and significant at less that the 1% level. Overall, results indicate that Chairmen are also dismissed for poor share performance. This in turn suggests that internal governance mechanisms are inclined to penalise not only the company's CEO but also his monitor when the firm's performance is deteriorating.

As reported in Chapter 4, a marginal decrease in prior year's shareholder returns increases the possibility of a forced MSE departure by 4.5 percentage points. Comparing this effect with that of shareholder returns on forced Chairman departures, it

is evident that worsening share performance has a larger impact on the turnover likelihood of the Most Senior Executive. A marginal decrease in prior year's shareholder returns increases the possibility of a forced MSE departure by an additional 2.8 percentage points (0.045-0.017). This finding combined with the observation made in Table 5.2 that forced MSE resignations are about 43% of total MSE departures while forced Chairmen departures account for only 16% of total Chairmen departures suggests that management changes involving the top executive are more important economic events than those not involving the top executive. That is broadly in line with the results of Denis and Denis (1995) who document that, contrary to the top executive departures, there is no evidence of significant declines in operating performance prior to non-top management changes.

To sum up, evidence confirms the argument that both the Most Senior Executive and the Chairman are dismissed when the firm's performance is deteriorating. This negative association is, however, more prevailing in the case of the MSE than the Chairman, since the former is regarded the company's dominant manager and the latter is treated as the company's second-most senior executive.

As mentioned in the previous section, in order to make valid inferences regarding the MSE turnover effect one should control for firm performance as appropriately as possible. Moreover, what is really required is a measure of firm performance that is believed to affect the turnover likelihood of both the Chairman and the MSE. This study attempted to tackle the above issue as follows:

In Chapter 4, it was shown that MSE turnover is linked with the first lag of both stock returns and accounting returns. According to Table 5.6, only shareholder returns, and in particular the first lag, are significant in explaining Chairman turnover. Moreover, Section 4.5.2 highlighted that MSE turnover is particularly high in the lowest decile of stock returns. Replicating the analysis in this section, it was found that prior year's share performance must fall dramatically for the Chairman to be forced out. For bad performers (i.e. lowest $SHR_{t-1}$ decile) the dismissal rate is about 6% as opposed to mediocre and good performers (i.e. median and highest $SHR_{t-1}$ decile respectively) with a dismissal rate 2% and less than 2% respectively. Consequently, a number of metrics focusing on prior year's stock returns, and especially the very low ones, may capture more effectively the impact of firm performance. In particular, the following three performance measures were used: a) prior year's shareholder returns, b) a dummy indicator equal to one (1) if the company is in the lowest decile of prior year's stock returns (Lowest $SHR_{t-1}$ Dummy), and c) an interaction term between the above two metrics.

The results from this exercise, in Table 5.7, reveal that being in the lowest decile of stock returns is a very significant predictor of the Chairman turnover. The marginal effects of both the negative dummy and its interaction with prior year's shareholder returns are positive and highly significant under forced Chairman changes. Overall, it seems that prior year's stock returns, and furthermore being in the lowest decile of prior year's stock returns, has significant implications for both Chairman turnover and MSE turnover. Accordingly, the rest of the analysis in this chapter adopts the above performance measures instead of the regular ones (i.e. two lags of stock-based and accounting-based performance).

**Table 5.7: Estimates of Probit Models Relating Chairman Turnover to Prior Year's Share Performance, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | **All changes** | **Forced changes** | **Non-Forced changes** |
| $SHR_{t-1}$ | -0.020 | -0.014 | -0.002 |
| | (0.554) | (0.393) | (0.935) |
| Lowest $SHR_{t-1}$ Dummy | 0.081 | 0.099 | -0.017 |
| | (0.078) | (0.000) | (0.604) |
| $SHR_{t-1}$* | 0.064 | 0.039 | -0.004 |
| Lowest $SHR_{t-1}$ Dummy | (0.282) | (0.072) | (0.932) |
| SIZE | 0.007 | 0.000 | 0.006 |
| | (0.183) | (0.693) | (0.194) |
| AGE | 0.009 | -0.000 | 0.010 |
| | (0.000) | (0.062) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 2040 | 2034 | 2034 |
| Pseudo $R^2$ | 0.050 | 0.106 | 0.075 |
| Log Lik. | -812.3 | -203.0 | -696.8 |

**NOTE:** p-values in parentheses

### *5.6.2 Chairman Turnover and MSE Succession*

Whilst the previous section demonstrated that Chairmen - like MSEs - are replaced when under-performing, where Chairman and MSE turnover were treated as two independent events, this section links the two events and asks whether their replacement takes place around the same time. That is, it explores whether – after controlling for poor performance - there is a positive association between changes at the Chairman position and changes at the top position (MSE) as well as a positive relation between the former and outside succession. The econometric results are shown in Table 5.8. Model (1) examines the relation between Chairman departures and concurrent MSE turnover and outside succession, whilst Model (2) expands the analysis to subsequent Chairman departures.

**Table 5.8: Estimates of Probit Models Relating Chairman Turnover to MSE Departures and Outside Succession, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Model 1 Dependent Variables | | | Model 2 Dependent Variables | | |
|---|---|---|---|---|---|---|
| | A | F | NF | A | F | NF |
| $MSE_t$ | 0.082 | 0.035 | 0.025 | 0.112 | 0.042 | 0.073 |
| | (0.046) | (0.002) | (0.488) | (0.002) | (0.009) | (0.026) |
| $OUTSIDE_t$ | 0.096 | 0.008 | 0.071 | - | - | - |
| | (0.093) | (0.374) | (0.196) | | | |
| $MSE_{t-1}$ | - | - | - | -0.024 | -0.007 | -0.016 |
| | | | | (0.477) | (0.638) | (0.600) |
| $SHR_{t-1}$ | -0.030 | -0.022 | -0.000 | -0.048 | -0.058 | -0.008 |
| | (0.383) | (0.056) | (0.981) | (0.243) | (0.047) | (0.817) |
| Lowest $SHR_{t-1}$ Dummy | 0.076 | 0.068 | -0.009 | 0.070 | 0.080 | 0.019 |
| | (0.106) | (0.000) | (0.802) | (0.214) | (0.064) | (0.701) |
| $SHR_{t-1}$* | 0.084 | 0.043 | 0.008 | 0.084 | 0.089 | 0.023 |
| Lowest $SHR_{t-1}$ Dummy | (0.181) | (0.009) | (0.872) | (0.247) | (0.067) | (0.712) |
| SIZE | 0.012 | 0.001 | 0.010 | 0.019 | 0.004 | 0.015 |
| | (0.036) | (0.328) | (0.047) | (0.004) | (0.171) | (0.014) |
| AGE | 0.090 | -0.000 | 0.010 | 0.011 | -0.001 | 0.012 |
| | (0.000) | (0.027) | (0.000) | (0.000) | (0.110) | (0.000) |
| Time Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 1942 | 1936 | 1936 | 1436 | 997 | 1433 |
| Pseudo $R^2$ | 0.061 | 0.175 | 0.081 | 0.069 | 0.100 | 0.085 |
| Log Lik. | -766.5 | -179.2 | -634.8 | -599.8 | -130.3 | -532.7 |

**NOTES:**
1. A: All Chairman changes; F: Forced changes; NF: Non-Forced changes
2. p-values in parentheses

Consistent with the findings in Table 5.5, the above results document that Chairman turnover is positively and significantly correlated with departures from the Most Senior Executive position. In particular, the likelihood of all Chairman turnover increases by 8.2 percentage points when the MSE also turns over; the estimate is significant at less than the 5% level. The results resemble those of Schaefer et al. (2000) who document a 6.3 and 7.1 percentage points increase in the turnover likelihood of the company's COO/CFO and other non-CEOs respectively, following CEO turnover.

However, the critical question is whether Chairmen are forced to resign when the Most Senior Executive also turns over since their departure is a fundamental pre-condition for

the successful implementation of any subsequent changes. Results indicate that when the Most Senior Executive turns over the likelihood of a forced Chairman turnover increases by 3.5 percentage points, suggesting that not only Chairmen leave office the same time as CEOs but more importantly, Chairmen are forced to do so. Although, one cannot empirically observe who initiates the departure of the Chairman (i.e. board of directors and/or new CEO) the point is that the latter must go when the CEO also goes in order to enable the new CEO to carry out his plans. Finally, note that performance remains a significant determinant of forced Chairman departures. Prior year's shareholder returns enter with a negative and significant sign of 0.022 whereas both the lowest dummy indicator and the interaction variable are positive and very significant.

In contrast with MSE turnover, results regarding the effect of outside MSE succession are less conclusive. First of all, analysis demonstrates that the likelihood of Chairman turnover is *further* increased by almost 10 percentage points following an outside succession, although this effect is significant only at the 10% level. The results are broadly consistent with those of Schaefer et al. (2000) who argue that the probability of COO/CFO turnover increases by an *additional* 8 percentage points if the new CEO is hired from outside the firm. Nevertheless, when the dependent variable is non-forced Chairman turnover, and more importantly forced Chairman turnover, the effect of outside succession becomes insignificant.

It seems therefore, that although Chairmen tend to be removed when the Most Senior Executive also turns over, the arrival of outsiders is not significantly associated with the likelihood of further Chairman dismissals. This in turn is in line with the inertial view, according to which outsiders are constrained in their attempts to promote changes by the complexity of big companies and the large number of persons involved. This is

particularly true in the current study where the sample consists of the largest UK companies and Chairmen may have established long-term and solid relations with the rest of directors and/or shareholders. Hence, although departures from the top position are important enough events to shake-up existing relationships and be linked with Chairman changes, outside succession does not seem to be compelling enough to be associated with more instability and therefore additional Chairman adjustments.

The above analysis was expanded by inquiring whether the increased propensity of Chairmen to depart in the period surrounding MSE turnover is transitory, or if Chairmen are more likely to depart in the years just after MSE succession. If Chairman departures occur mainly in the year of MSE turnover and then drop off, then the marginal effect of $MSE_{t-1}$ is expected to be close to zero. In Model (2) of Table 5.8 the analysis excluded two types of observations. Firstly, those Chairmen who were not linked with the departure of the prior year's MSE (i.e. those Chairmen who were not present at both t and t-1 years). And secondly, those observations in which a second consecutive MSE departure took place; in those cases it is difficult to disentangle the effect of prior year's MSE departure from this year's MSE departure on Chairman turnover.

The predicted pattern holds for forced Chairman departures; the estimate of the dummy indicator $MSE_{t-1}$ is –0.007. Under all definitions of Chairman turnover, however, the dummy indicator $MSE_{t-1}$ is insignificant. In contrast, the variable $MSE_t$ remains positive and very significant indicating that Chairman turnover tends to take place in the period surrounding departures at the top position and not at later stages.

Overall, the analysis supports Hypothesis 2 but does not strongly confirm Hypothesis 5. That is, decision rights re-shuffling within top management, i.e. Chairman replacements, tend to be associated with MSE turnover but not with outside succession. Moreover, it is often the case that Chairmen are ousted from the board instead of voluntarily leaving the office, when the Most Senior Executive turns over as well.

### *5.6.3 Chairman Turnover and MSE Succession in Poorly Performing Companies*

According to Hypotheses 3 and 6 stated in Section 5.2, the association between MSE departures/outside succession and the likelihood of Chairman turnover may vary at different levels of firm performance. In particular, it is predicted that both relations will be more pronounced if the firm is under performing. These claims were investigated by interacting both MSE turnover and outside succession with the lowest stock return dummy.

As indicated in Table 5.9 and consistent with the above predictions, conditional on MSE turnover the probability of all and forced Chairman departures increases by 24.5 and 5.7 percentage points respectively if also the company's performance is extremely poor; both estimates are significant at the 10% level. Similarly to Schaefer et al. (2000), this analysis suggests that top executive turnover is more likely to be associated with Chairman departures when the firm's performance is deteriorating. More importantly, however, this analysis suggests that the combination of CEO turnover and bad firm performance increases the likelihood that the Chairman will be forced to resign. A plausible explanation of the above is that new CEOs are more likely to shake up

management teams when taking over poorly performing companies than healthy ones, since this is a fundamental prerequisite for their turnaround.

**Table 5.9: Estimates of Probit Models Relating Chairman Turnover to MSE Departures and Outside Succession in Poorly Performing Companies, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | **All changes** | **Forced changes** | **Non-Forced changes** |
| $MSE_t$ | 0.049 | 0.018 | 0.030 |
| | (0.259) | (0.125) | (0.449) |
| $OUTSIDE_t$ | 0.044 | 0.014 | 0.008 |
| | (0.477) | (0.334) | (0.878) |
| $MSE_t$* | 0.245 | 0.057 | -0.023 |
| Lowest $SHR_{t-1}$ Dummy | (0.056) | (0.091) | (0.794) |
| $OUTSIDE_t$ * | 0.180 | -0.007 | 0.408 |
| Lowest $SHR_{t-1}$ Dummy | (0.252) | (0.534) | (0.048) |
| $SHR_{t-1}$ | -0.036 | -0.023 | -0.004 |
| | (0.297) | (0.050) | (0.889) |
| Lowest $SHR_{t-1}$ Dummy | 0.026 | 0.053 | -0.026 |
| | (0.587) | (0.003) | (0.509) |
| $SHR_{t-1}$* | 0.107 | 0.047 | 0.023 |
| Lowest $SHR_{t-1}$ Dummy | (0.129) | (0.007) | (0.670) |
| SIZE | 0.012 | 0.001 | 0.009 |
| | (0.034) | (0.283) | (0.049) |
| AGE | 0.009 | -0.000 | 0.010 |
| | (0.000) | (0.030) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 1942 | 1936 | 1936 |
| Pseudo $R^2$ | 0.071 | 0.182 | 0.082 |
| Log Lik. | -758.7 | -177.7 | -660.0 |

**NOTE:** p-values in parentheses

In contrast, results do not provide strong evidence in support of Hypothesis 6. In particular, the marginal effect of the interaction term $OUTSIDE_t$*Lowest $SHR_{t-1}$ Dummy is positive and significant under non-forced Chairman changes. This could be attributed to the fact that Chairmen voluntarily leave the firm when the MSE goes because the value of their relationship with the company is lower since they make human capital investments specific to the MSE who is now departing. This may be especially the case when an outside CEO joins the company and the firm's financial

health is worsening. Nevertheless, analysis reveals that the likelihood of both all and forced Chairman departures does not *further* increase following an outside appointment, even when companies are performing badly. The marginal effect of the interaction variable is highly insignificant under both all and forced Chairman changes. Overall, the data continue to support the inertial view where outside candidates are unable to proceed with major transformations even when the firm's economic status is in peril.

### *5.6.4 Chairman Turnover Following Different Types of MSE Departure*

According to Hypotheses 4 and 7 stated in Section 5.2, the impact of both MSE turnover and outside succession on the likelihood of Chairman turnover may vary under different types of Most Senior Executive changes. More specifically, both relations - if any - are predicted to be even more pronounced when the previous Most Senior Executive is forced out compared with a routine departure. These hypotheses were investigated by examining the effect of MSE departures and outside succession on the turnover possibility of Chairmen under the definitions of forced and non-forced MSE turnover. Results are depicted in Table 5.10. A comparison between the two types of MSE turnover events yields a number of valuable observations.

Firstly, following the dismissal of the Most Senior Executive of a company, the likelihood of a Chairman departure increases by 16.7 percentage points; this effect is significant at less than the 5% level. Secondly, results indicate that although there is no relation between a forced MSE turnover and a non-forced Chairman departure, a dismissed under-performing MSE necessitates the removal of the Chairman as well. The marginal effect of the MSE Forced$_t$ variable is 0.108 under forced Chairman changes and very significant. Thirdly, in contrast with forced MSE turnover and in accordance

with the predictions, there seems to be no relation between non-forced MSE turnover and all definitions of Chairman departures. These findings taken together with the observation that 30% of Chairmen depart following a forced MSE turnover as opposed to 15% cases of Chairman turnover following a non-forced MSE departure (see Table 5.5) support the following dual hypothesis: a) a replaced under-performing CEO suggests that the Chairman did not perform his monitoring duties successfully and hence must be replaced as well, and b) a dismissed CEO, as opposed to a natural turnover, is linked with substantial organisational restructurings, such as Chairman departures.

Results regarding the effect of outside succession following different types of MSE turnover are very clear. All the marginal effects of the outside variables are positive but insignificant. To recap the above findings, evidence supports Hypothesis 4 but does not confirm Hypothesis 7. That is, although forced Most Senior Executive turnover appears to be a more disruptive organisational event than natural succession, outside appointments following forced turnovers do not seem to be associated with more changes than those following voluntary departures. In fact, in either case outside succession is not associated with further increases in the Chairman turnover likelihood.

Results in this section are in line with Schaefer et al. (2000) who report that non-CEO turnover is not significantly impacted if the previous CEO's departure is routine and Kang and Shivdasani (1995) whose findings suggest that outsiders are not perceived as ambassadors of organisational change even when the departing CEO is ousted. They contrast, however, the conclusions reached by Clayton et al. (2000) and Khurana and Nohria (2000) who find that outside candidates replacing dismissed CEOs may improve

significantly subsequent firm performance or bring in great organisational restructurings. It appears, therefore, that although an outside appointment coupled with forced CEO turnover is quite effective in promoting the implementation of transformation plans (e.g. the selling of unprofitable divisions), it is still constrained by the large number of interests vested when it comes to the replacement of Chairmen.

**Table 5.10: Estimates of Probit Models Relating Chairman Turnover to Forced and Non-Forced MSE Departures as well as to Outside Succession Following Forced and Non-Forced MSE Changes, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Independent Variables | Dependent Variables | | |
|---|---|---|---|
| | All changes | Forced changes | Non-Forced changes |
| MSE Forced$_t$ | 0.167 | 0.108 | 0.009 |
| | (0.017) | (0.000) | (0.866) |
| MSE Non-Forced$_t$ | 0.031 | -0.001 | 0.035 |
| | (0.542) | (0.846) | (0.452) |
| OUTSIDE Forced$_t$ | 0.072 | 0.003 | 0.056 |
| | (0.370) | (0.753) | (0.496) |
| OUTSIDE Non-Forced$_t$ | 0.095 | 0.007 | 0.091 |
| | (0.247) | (0.701) | (0.232) |
| $SHR_{t-1}$ | -0.030 | -0.021 | -0.000 |
| | (0.386) | (0.058) | (0.976) |
| Lowest $SHR_{t-1}$ Dummy | 0.073 | 0.068 | -0.009 |
| | (0.119) | (0.000) | (0.803) |
| $SHR_{t-1}$* | 0.088 | 0.044 | 0.005 |
| Lowest $SHR_{t-1}$ Dummy | (0.163) | (0.005) | (0.915) |
| SIZE | 0.012 | 0.001 | 0.010 |
| | (0.035) | (0.327) | (0.047) |
| AGE | 0.009 | -0.000 | 0.010 |
| | (0.000) | (0.023) | (0.000) |
| Time Effects | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes |
| Observations | 1942 | 1936 | 1936 |
| Pseudo $R^2$ | 0.063 | 0.205 | 0.078 |
| Log Lik. | -764.7 | -172.6 | -663.5 |

**NOTE:** p-values in parentheses

## 5.7 Additional Robustness Tests

In this section the robustness of the baseline results is tested. All models provide standard errors that have a stationary covariance matrix. The adjustment was made using the White (1980) method. Similarly to Chapter 4, this section examines the

sensitivity of the results when: a) changes rather than levels of accounting earnings were used, b) relative performance measures were adopted, and c) a number of dubious Chairman changes was excluded. In addition, since an important task of this study was to control for firm performance as effectively as possible, this section tests the sensitivity of the results when other performance benchmarks were used. To avoid repetition, results are briefly discussed rather than fully reported.

### *5.7.1 Levels versus Changes in Accounting Earnings*

The models in Table 5.6 were re-run by using differences in accounting earnings instead of levels of accounting earnings. The primary findings are broadly similar. Because of the large number of non-forced Chairman departures, there seems to be no association between the likelihood of all Chairman departures and firm performance, both stock-based and accounting-based. On the other hand, forced Chairman turnover is negatively and significantly associated with prior year's stock returns; the marginal effect is -0.013 and significant at the 5% level. Accounting performance remains an insignificant predictor of forced Chairman turnover.

### *5.7.2 Relative Measures of Performance*

The models in Table 5.6 were re-run by using relative performance measures, such as prior years' industry adjusted stock returns and prior years' industry adjusted accounting earnings. Again, results were qualitatively consistent. After controlling for the competitors' performance, incremental decreases in only past year's stock returns increase the likelihood of Chairman dismissal. In contrast, none of the relative performance measures is correlated with non-forced Chairman departures. Finally, none

of these measures provides additional explanatory power over results presented in Table 5.6.

### *5.7.3 Misclassification of Chairman Changes*

As shown in Table 5.2 there were 16 Chairman departures for which information available was limited. Since there is a fairly high possibility of misclassification, the sensitivity of the results was investigated.

In all cases results were consistent. There were only two exceptions. As reported in Table 5.6 there seems to be a positive association between non-forced Chairman turnover and the second lag of accounting returns. Similarly, Table 5.8 reports a positive relation between the likelihood of all Chairman turnover and outside succession. Both relations, however, are eliminated following the exclusion of the 16 ambiguous observations. It may be the case, therefore, that the above estimated effects are due to the misclassification of a few Chairman departures.

### *5.7.4 Alternative Performance Benchmarks*

As explained in Section 5.6.1, this study used a number of performance metrics based on the lowest decile of share performance in order to more appropriately control for the effect of firm performance. It is important to mention, however, that the results of the current chapter are broadly consistent if alternative performance benchmarks are used, and in particular if: a) both share and accounting performance variables are used (similarly to Chapter 4), b) the lowest dummy equals one (1) if the firm is in the lowest 5% of stock returns and zero (0) otherwise, and c) the lowest dummy equals one (1) if the firm is in the lowest 20% of stock returns and zero (0) otherwise. Since the case of

dismissed Chairmen is of particular interest, this section will summarise the primary findings under this definition of Chairman turnover.

Accordingly, the likelihood of Chairman dismissal increases if the company is in the lowest 5% of $SHR_{t-1}$ or the lowest 20% of $SHR_{t-1}$; the marginal effects are 0.019 and 0.137 respectively and both significant[24]. Secondly, Chairman dismissal is associated with MSE turnover but not with outside succession under all three scenarios: the marginal effects on the $MSE_t$ dummy are 0.048, 0.035 and 0.037 respectively whilst the estimates on the outside dummy are all insignificant. Thirdly, the above relation is stronger under scenarios b) and c) but not under scenario a). Fourthly, Chairman dismissals are more likely following a forced MSE turnover than a non-forced one; the estimates on MSE $Forced_t$ are 0.136, 0.110, and 0.115 under the three alternative scenarios in contrast with the MSE Non-$Forced_t$ variable that always turns out insignificant. Finally, outside succession does not seem to be associated with Chairman turnover even if companies perform badly or following a forced MSE turnover under all possible cases; the estimates of the outside succession variables are insignificant.

## 5.8 Concluding Remarks

This chapter has considered the determinants of Chairman turnover based on a sample of 309 Chairman departures of the top 460 UK companies over the period 1990-1998. It is the first study in the UK to explicitly focus on the modelling of Chairman turnover, a unique and distinctively different role from the rest executives, especially in the UK. The objectives were to address four crucial questions. Firstly, do internal governance

[24] The results regarding the Chairman turnover-performance relation when both stock-based and accounting-based performance measures are used were already shown in Table 5.6.

systems penalise Chairmen - and not only CEOs - for poor performance? Secondly, do Chairmen leave office at the same time as CEOs and if yes are they forced to or do they go voluntarily? Thirdly, are forced CEO resignations more disruptive than natural turnover events? Finally, is outside succession associated with additional organisational turbulence by further increasing the likelihood of Chairman turnover?

The results add to both the corporate governance literature (e.g. Denis and Serrano 1995; Schaefer et al. 2000) and the organisational change literature (e.g. Helmich and Brown 1972; Cannella and Lubatkin 1993). In particular, the analysis generated four substantive findings. Firstly, there is a negative and robust relation between firm performance and Chairman turnover. That is, Chairmen - like MSEs - are fired for poor performance. This correlation is, however, less negative compared to that of MSE turnover; management changes involving the top executive are more important economic events than those not involving the top executive.

Secondly, changes at the top position can act as a catalyst for further alterations in the composition of the existing top management teams. Evidence revealed that Chairman departures tend to be related with the turnover of the Most Senior Executive. More importantly, Chairmen are forced to resign when the MSE also turns over as their removal is regarded a fundamental prerequisite for the implementation of the new CEO's restructurings.

Thirdly, the link between Chairman turnover and Most Senior Executive departures is stronger under two circumstances. Firstly, when the firm is performing really badly indicating that incoming CEOs are more inclined to shake up existing top management

teams when they take over under-performing companies than healthy ones. And secondly, when the departing MSE is forced out. This observation in turn implies that: a) the Chairman's removal is necessary as he failed to perform his monitoring duties successfully and b) forced CEO turnover is associated with greater organisational instability than routine CEO departure.

Finally - consistent with the inertial view of organisational theory - outside succession does not seem to further increase the likelihood of Chairman turnover; the result remains the same even when companies perform badly or when the previous MSE is forced out. This in turn implies that outsiders' efforts to implement major changes - and in particular the departure of the Chairman - may be little supported or even constrained by the rest internal management that may feel maligned or even threatened by the arrival of the new CEO.

This chapter has argued that the turnover of the company's leading executive can be a very important economic event with major organisational implications. CEO turnover, however, can have significant consequences not only for the company's operational and structural decisions but also for its investment decisions. Indeed, it is often argued that investment choices can be appropriately managed in the years leading up to the departure of the CEO. It is these claims that become the central focus of the thesis's last empirical chapter.

# CHAPTER 6

# Most Senior Executive Departures and Investment Decisions

## 6.1 Introduction

The focus of this chapter is the detection of earnings management and in particular the investigation of two classes of potential managerial discretion associated with CEO departures: a) the "horizon" hypothesis, and b) the "cover-up" hypothesis. Whilst both of the above hypotheses predict that departing managers have incentives to reduce investment in order to inflate earnings, the first one is predicted to be more severe under anticipated departures (Dechow and Sloan 1991) whereas the second is expected to be more pronounced under forced departures (Murphy and Zimmerman 1993).

The investigation of earnings management strategies within the context of executive turnover is particularly limited. Moreover, the majority of the studies in this literature focus on choices of accounting policy (e.g. Strong and Meyer 1987; Pourciau 1993; Wells 2000). Real cash flow choices at the time of CEO departures, such as changes in investing decisions, have been much less often the focus of the earnings management literature (e.g. Dechow and Sloan 1991; Gibbons and Murphy 1992; Murphy and Zimmerman 1993). In the UK, Conyon et al. (1997) provide a preliminary study of the horizon phenomenon. Overall, the impact of CEO turnover on investment decisions is still open to considerable debate.

The contribution of this chapter is threefold. Firstly, the quality of the data allows a comprehensive and detailed classification of MSE departures ensuring thus, a more powerful test of the horizon and the cover-up hypotheses than hitherto. Specifically, based on multiple information derived from a number of sources (as described in Chapter 3) this study uses a much less noisy measure of both forced and anticipated MSE departures. This is unique to the literature. The majority of past research is limited in its attempt to identify conditions in which managers' incentives to manage earnings are likely to be strong. As Pourciau (1993, p.318) stresses "to construct a powerful test of earnings management in the presence of executive changes, it is useful to identify situation-specific factors that provide special incentives and opportunities for certain discretionary accounting choices". Nevertheless, the prior empirical literature does not perform a comprehensive classification of CEO departures. Instead CEO departures are partitioned into two main groups –routine and non-routine – based only on the age of the departing manager.

The second contribution is the investigation of the incentive alignment role of stock-based executive compensation. It is often argued that stock holdings may discourage managers to diverge from value-maximising behaviour and to act in their own interest (Ross 1973; Lambert and Larcker 1991). Nevertheless, the role of stock-based compensation in mitigating the opportunistic incentives of CEOs with short horizons has less often been examined; in fact, Dechow and Sloan (1991) are among the very few who address this issue. Accordingly, the current chapter provides additional evidence by testing whether the horizon predictions differ for MSEs with different amounts of stock holding (both ordinary and incentive).

Finally, a significant methodological advancement of the study is that it investigates the level of investment expenditure during the MSEs' final years where an underlying theory of optimal investment is adopted. This is in contrast with the prior literature that typically assumes that, in the absence of earnings manipulation, the expected change in investment expenditure is constant over time. As Healey and Wahlen (1999, p.370) point out "to identify whether earnings have been managed, researchers first have to estimate earnings before the effects of earnings management. This is not an easy task". Similarly, to identify whether the expected level of investment expenditure has changed (either upwards or downwards), one must have an explicit theory concerning the investment level in the absence of manipulation. In other words, cutbacks in corporate investment could be attributed either to the CEOs' short horizon or to the rejection of non-valuable investment opportunities. Under the latter view, known as the "efficiency" view, the reduced investment expenditure represents the firm's value-maximising investment strategy. Prior literature has controlled for differences arising from market-wide trends in investment expenditure but has failed to provide an explicit firm optimal investment schedule.

This chapter attempts to fill in this gap, by modelling investment based on the Euler equation of the standard neo-classical model of capital accumulation subject to adjustment costs. That is, it investigates the impact of MSE departures on their investment decisions, assuming that in the absence of manipulation managers' objective is the maximisation of the firm's value. The above is performed by estimating a richer econometric investment model through generalised method of moments (GMM), as this technique is considered a more appropriate one (to be discussed later).

To anticipate the findings, I shall briefly outline the main conclusions. In general, results fail to support the horizon hypothesis. Most Senior Executives approaching a known retirement or a normal succession do not manipulate investment in order to increase the reported income. Secondly, the econometric results yield no support for the argument that retiring MSEs may behave opportunistically if they have low equity stakes. Finally, analysis demonstrates that MSEs approaching a forced departure do reduce investment in order to improve the firm's deteriorating accounting performance and hence, delay their job termination. This finding, however, is subject to one main limitation; the systematic poor performance preceding forced departures potentially confounds the interpretation of tests of the cover-up hypothesis.

The remainder of the chapter is organised as follows. Section 6.2 provides a qualitative discussion of the context of earnings management. That is a) why is it possible for managers to decrease the level of investment in order to increase reported earnings? And b) why do managers have incentives to do so? Section 6.3 summarises prior empirical evidence and highlights the contributions of the current study. Section 6.4 details the empirical strategy whilst Section 6.5 addresses a number of important methodological issues. In Section 6.6 the results are presented and discussed. Finally, Section 6.7 offers some concluding remarks.

## 6.2 Motivation and Hypotheses Development

Typically the context of earnings management consists of two main elements. Firstly, the feasibility of earnings management; that is to what extent is it possible for managers to alter earnings? Secondly, the incentives of such strategies, i.e. why do managers wish to increase/decrease reported earnings? Whilst the first question is a more generic one

and applies in a variety of contexts the second one is situation-specific and therefore, it will be discussed within the context of investment choices associated with CEO departures.

### *6.2.1 The Feasibility of Earnings Management*

In her commentary on earnings management, Schipper (1989) postulates two main conditions under which it is possible for managers to alter reported earnings. Firstly, the partial-information contract condition and secondly the blocked communication condition.

Earnings management might persist because of the partial-information contract condition, i.e. because of the fact that compensation contracts are based on partial/incomplete information. That is, contracts – typically - include simple fixed (often linear) decision rules because writing, monitoring and enforcing more complicated contracts based on more information places too many demands on human agents whose information processing capacities are bounded by time and ability. In other words, earnings management could be eliminated but it's not worth the cost. In a similar vein, contracting frictions are another explanation for why managerial behaviour - rewards and penalties - would be based on just a subset of information. The elimination of compensation contracts that use accounting-based performance measures, for example, could be a way of removing managerial incentives to manage earnings. But this solution could have costs in terms of creating incentive problems; if contracts are written in order to exclude everything the manager could manipulate, there would likely be very few informative signals left to use in the contract.

The term blocked communication refers to the existence of information asymmetries between shareholders and managers that persist since managers do not communicate all their private information (Schipper 1989). If managers could communicate all their private information without creating costs (e.g. without this information being used by shareholders against managers), we would expect contracts to be arranged so that managers would have incentives to reveal all private information. Alternatively, if shareholders had complete information regarding the CEO's activities and the firm's investment opportunities they could design a contract specifying and enforcing the managerial action to be taken in each state of the world. Managerial action and investment opportunities are not, however, perfectly observable by shareholders; indeed, shareholders, do not often know what actions the CEO *can* take or which of these actions will increase shareholder wealth. Since, the kinds of contracts that can be offered are restricted- as they certainly are in practice- then there can be no guarantee that full communication can be induced.

In fact, information asymmetries may exist not only between managers and shareholders but also between managers and the board of directors. An implicit assumption of the analysis undertaken in this chapter is that the CEO is able to "fool" the rest of the board through the firm's investment policies. Likewise shareholders, company directors form their decisions based on information obtained from the CEO, which may well be misleading (Jensen 1993). Moreover, it is the board's responsibility to obtain information regarding the company's available investment opportunities from multiple sources and appropriately analyse it in order to detect any type of managerial discretionary behaviour. The efficacy of the above internal monitoring, however, may be hindered because of various reasons.

For example, outside directors with multiple directorships, company directors with low equity-based remuneration, or directors that owe their positions to the CEO may have little to gain from investing the time and effort required to successfully monitor the CEO and "block" any attempt of earnings manipulation. In a similar vein, directors' tenure can play an important role as well. Because boards rarely meet more often than once a month it takes a long time, particularly for a non-executive, to know the company and to become effective. Unless directors serve on board for a sufficiently long period, their success in evaluating CEO's investment proposals is compromised.

Having commented on the opportunities available for managerial discretionary behaviour, the following sections present a theoretical discussion on the investment incentives of top executives associated with their departure.

### *6.2.2 The Horizon Hypothesis*

The main theoretical origin of the horizon phenomenon lies within the executive compensation literature and its interaction with career concerns. A number of agency scholars focused on the design of incentive models in which shareholders attempt to motivate top managers to make choices which will maximise shareholders' wealth, *given that uncertainty and imperfect monitoring exist* (e.g. Berhold 1971; Ross 1973; Jensen and Meckling 1976; Heckerman 1975; Mirrlees 1976; Holmstrom 1979).

In the above work, little attention is paid to the fact that the incentives of top managers could differ at different points in their career. Aspiring executives start their careers in low-level positions and work their way up through the ladder to higher-level positions over the life cycle. Consequently, career considerations are more important at the

beginning of a career than at the end. Towards the end of a career, if not before, the cards have been dealt and one's hands are pretty much known. Higher-level reassignments are unlikely, or impossible. At that point the potential influence of future prospects vanishes and only current incentives matter. In short, the manager's horizon is crucial to the problem of aligning managerial objectives and shareholder aims. Nevertheless, much of the literature has analysed incentives in a timeless context whilst important new issues arise when the problem is examined over a person's career (Rosen 1992).

An early attempt to address the issue is made by Murphy (1986) who contrasts pure learning with pure incentive theories of the executive labour market. In the learning theory the manager is paid the value of expected productivity estimated from previous output whereas more is learned at the beginning of a career than at the end. On the other hand, the incentive problem looks much the same from one period to the next. Under the learning model, thus, the sensitivity of compensation to performance declines as tenure increases (because, once abilities are estimated with precision there is no reason for further wage revisions) whilst under the incentive model it does not. When the two models are combined, incentives to invest in learning still decline over time and less learning takes place, but more importantly, now it is necessary to substitute current performance incentives for diminishing career incentives over the life cycle.

A more promising approach is taken by Gibbons and Murphy (1992) who consider the efficiency properties of career concerns vis-à-vis incentive contracts in aligning the shareholders' and the top executives' views. In their theoretical work, they add incentive contracts to the Fama (1980)-Holmstrom (1982) model. The first one argues

that incentive contracts are not necessary because managers are disciplined through the managerial labour market whilst the second one shows that although such labour market discipline can have substantial effects, it is not a perfect substitute for contracts. Following Fama and Holmstrom, Gibbons and Murphy argue that career concerns can have important effects on incentives even in the presence of contracts.

In particular, they demonstrate that the best possible contract optimises total incentives, i.e. the combination of the implicit incentives from career concerns and the explicit incentives from the compensation contract. Indeed, as executives get closer to leaving the company the misalignment of interests between shareholders and managers becomes more marked, as the worker's ability becomes less uncertain and the career concerns become less important. Consequently, this work suggests that when the CEO is young reputational concerns for future career can be used to control agency costs (e.g. monitoring). This, however, is not possible towards the end of the CEO's career, as he/she has no such concerns. As a result, agency costs – in this case – could be controlled by another mechanism, such as additional monetary incentives.

The above discussion leads to the conclusion that the closer the CEO is to departure the less concerned he/she is with his/her career, and more concerned he/she becomes with personal gain. The behaviour of investment expenditure around the time of CEO departures provides an opportunity for an empirical test of the above predictions. More specifically, it is predicted that departing CEOs decrease investment expenditure in order to increase earnings (and earnings-based compensation) in their final year at the expense of future earnings. This negative impact, however, is expected to be more severe when the CEO's departure is anticipated by him (Dechow and Sloan 1991;

Murphy and Zimmerman 1993). It is in those cases that CEOs know their time-span further in advance, which thus gives them more opportunity to reduce investment expenditures. As discussed in Chapter 3, whilst other types of departure may entail some element of anticipation, undoubtedly retirements (and especially those not triggered by poor performance) and normal successions can be viewed as planned departures. The horizon phenomenon, therefore, predicts that:

*H1: Investment expenditure is more likely to be reduced in the years preceding and leading up to a MSE's departure who approaches a* ***retirement or normal succession****.*

Whilst the main theoretical background of the horizon hypothesis is the career concerns literature, it is worth commenting that it is also based on two main implicit assumptions. Firstly, accounting-based compensation provides managers with incentives to increase accounting earnings (i.e. the "bonus-plan" hypothesis); and secondly bonuses based on accounting earnings constitute an important part of executive compensation.

In their pioneering work on a positive theory of the determination of accounting standards, Watts and Zimmerman (1978) argue that managerial bonuses - tied to current accounting earnings - result in the selection of income-increasing accounting standards. Following Watts and Zimmerman, a number of papers provide direct evidence that earnings-based bonus plans affect managerial decision making and in particular that senior executives manipulate accounting earnings, either through accounting choices or investment choices, to maximise their compensation (e.g. Healey 1985; Holthausen,

Larcker and Sloan 1995; Murphy 1999; Leone and Rock 1999)[25]. These findings suggest that managers take predictable actions to increase their earnings-based bonuses.

A number of extensive surveys reveal that earnings-based bonus schemes have been an increasingly popular means of rewarding top executives in the UK. Income Data Servics (1993) report that in 1979 only 8% of large UK companies had an annual bonus scheme for their top executives; by 1993 almost all companies had some form of annual bonus plan for their executives. Based on the data from reports and accounts of companies in the FT 100, FT 350 or FT 500, PriceWaterhouseCoopers (1996, 1997, 1998, 2000) conducts annual surveys regarding the developments in directors' remuneration. According to their findings, approximately 86% of the companies had bonus plans in years 1995, 1996 and 1997 whereas annual bonus schemes extending to executive directors were identified in approximately 90% of the companies in years 1998 and 1999. Moreover, the dominance of accounting profits and earnings per share (EPS), as the most frequently used performance criteria in annual bonus schemes, is mirrored in the above surveys; the use of EPS ranges from 34% to 44% of the companies (depending on the sample and the year of the survey) whilst the use of profits ranges from 24% to 42%. Based on a world-wide survey in large industrial companies, Towers Perrin (2000) report that CEO bonus compensation as a percentage of annual basic compensation was 20% in 1996 and 25% in 2000.

Academic studies of bonus plans are particularly sparse in the UK, mainly due to the disclosure policies that did not require companies to report full details of all elements in the packages of top executives. In particular, bonus data are not available prior to 1993

[25] A review of the bonus-plan literature is beyond the scope of the thesis, as it does not attempt to provide a direct test of the bonus-plan hypothesis.

as this is the first year they were separately reported (in line with the Cadbury committee recommendations). Conyon et al. (1995) provide some descriptive data on executive compensation trends in the UK. Inspecting the company accounts of the FT Top 100 companies in 1993, they document that among these firms the mean share of the bonus in total direct compensation (base salary plus bonus) is 0.22, suggesting that bonuses form an important part of executive compensation. A more recent study on the composition of executive compensation is given by Conyon and Murphy (2000a). Based on a sample of the 510 UK CEOs in 1997, they report that bonus plans consist the second largest part of executive compensation (18%, after base salaries that account for 59% of the total pay). Moreover, they demonstrate that 81% of UK CEOs receive bonuses. Overall, the evidence strongly supports the assumption that executive compensation depends on accounting earnings.

Finally, a couple of interesting observations regarding the incentives of CEOs are noteworthy. Firstly, the assumption that CEOs approaching a non-performance related retirement or normal succession have incentives to increase earnings in order to increase bonuses may contradict the suggestion of Healey (1985) who argues that managers in good performing companies may wish to *decrease* earnings. This is because when the actual bonus is greater than the maximum, earnings exceeding that bound are lost for bonus purposes. By deferring income that exceeds the upper bound, managers do not reduce their current bonus while they increase their *expected* future award. Secondly the same assumption may also contradict the suggestion of Holthausen, Larcker and Sloan (1995) who predict that managers (and especially those in good performing companies) may wish not only to *increase* but also to *decrease* income (depending on whether actual performance is below or above targeted performance). The main rational is that

budget-based compensation arrangements can yield incentives for managers to *achieve*, but not to *surpass* and hence increase, *next year's* established performance standard. Both suggestions, however, have less (if none) implications for retiring CEOs who are not concerned for *next year's* bonus arrangements.

#### *6.2.2.1 The Horizon Problem and Managerial Stock Ownership*

Related to the discussion is the degree to which the horizon phenomenon takes place when the leaving CEO may care about the long-term welfare of the company. The most obvious case will be where the exiting executive holds large shareholdings in the company so that the present value of the CEO's wealth depends on the firm's market value.

As already mentioned, a number of agency studies focused on the design of incentive models in which shareholders attempt to motivate top managers to act at the best interest of the former (e.g. Ross 1973; Jensen and Meckling 1976; Mirrlees 1976). In this case, it is argued that the conflict between shareholders' interests and those of managers could be mitigated by tying executive compensation contracts to *shareholder returns.* A valuable implication of this is that stock-based compensation can actually alleviate the horizon problem by inducing the manager to adopt a more long-term perspective.

Indeed, it has been suggested (Jensen 1986, Rappaport 1990, Lambert and Larcker 1991) that the problem of under-investment can be curbed, by linking the manager's compensation to the market stock price. The academic argument is based on the tenet of *efficient capital markets*: if stock prices incorporate expected future cash flows, then the

rejection of positive net-present-value projects involves foregoing stock-price gains. To the extent that the manager's wealth is correlated with the firm's stock prices, incentives to opportunistically cut investment expenditure are moderated. Stated another way, to the extent that the manager's wealth is not correlated with the firm's stock prices, incentives to "misbehave" are augmented. This leads to the second hypothesis of the study:

*H2: Investment expenditure is more likely to be reduced in the years preceding and leading up to a MSE's departure approaching a known leave date, if the MSE owns a small stake in the company.*

### *6.2.3 The Cover-Up Hypothesis*

Similarly to the horizon hypothesis, the cover-up hypothesis predicts that CEOs approaching departure have incentives to decrease investment expenditure in order to increase reported income. However, the striking difference between the two is the managerial incentives that induce such a behaviour. In particular, there are two explanations behind the cover-up phenomenon.

Firstly, it is argued that outgoing CEOs in poorly performing companies threatened by job termination make accounting or investment decisions in an attempt to cover-up the firm's deteriorating economic health and hence, delay their termination (Murphy and Zimmerman 1993). That means that opportunistic managers are trying to affect the probability or the timing of their forced resignation. An implicit assumption of this argument is that the board of directors is not able to identify and discount the effects of income-increasing decisions. However, these choices are not easily identifiable in an

already noisy proxy for management performance; the effects of discretionary investment procedures add additional noise to the performance signal.

The signalling reasoning, which has been discussed by a number of scholars (e.g. Holthausen and Leftwich 1983; De Angelo 1988; Holthausen 1990) offers a second explanation of the cover-up hypothesis. According to this argument, managers "window-dress" earnings in a good faith attempt to convey inside information that the firm's "true" profitability under their management is greater than current earnings would otherwise indicate. An implicit assumption is that managers believe that current income is an inaccurate predictor of future earnings. As a result, managers have incentives to alter the reported income because a failure to do so will be incorrectly viewed as a negative signal about future firm profitability.

The above discussion highlighted the fact that the cover-up phenomenon is expected to be particularly acute when the CEO's departure is *performance* related. According to the evidence provided in Chapters 1 and 2 and other previous studies (e.g. Weisbach 1988; Conyon and Murphy 2000a), forced departures are associated with prior poor performance. Consequently, the cover-up phenomenon, predicts that:

*H3: Investment expenditure is more likely to be reduced in the years preceding and leading up to a MSE's departure who approaches a* ***forced*** *departure.*

Again, a couple of observations here are worth mentioning. Firstly, the cover-up hypothesis may be conflicting with the argument of Healey (1985) that managers of firms whose earnings fall below the amount necessary to earn a bonus (i.e. managers of

firms that under perform) have incentives to *under report* income. The argument being that by deferring earnings to the *next period*, managers maximise their expected future award. The immediate threat of job loss, however, suggests that job preservation, and not the hope of a future bonus is managers' main concern.

Secondly, a negative relation between the company's investment rate and forced CEO turnover does not necessarily imply discretionary behaviour by the outgoing CEO. An alternative explanation could be that incoming CEOs take a "bath", i.e. they boost future earnings at the expense of transition-year earnings by writing off unwanted operations and unprofitable divisions (the "big-bath" hypothesis). Incoming CEOs may wish to engage in such a discretionary behaviour either in order to increase their future compensation or in order to blame the old CEO and put themselves in the best light (Godfrey et al. 2001). Nevertheless, the big-bath hypothesis does not confound the results of this study, since the investment variable applied does not measure the total corporate investment *net-off disposals*. That is, the investment rate applied in this study consists *only* of the total *purchases* of new fixed assets, whilst the big-bath argument explains managerial incentives to *sell-off* unprofitable divisions. Consequently, a reduction in the investment rate is due to fewer purchases of capital stock and not due to increased write-offs of unfavourable divisions.

To sum up the chapter's theoretical review, it is very important to emphasise the fact that both the horizon and the cover-up hypotheses predict reduced investment expenditure prior to the CEO's departure. The crucial difference between the two, however, is the managerial motives that underlie this behaviour. More specifically, investment reductions under the horizon phenomenon are mainly attributed to the

decreasing reputational concerns of departing managers and their increasing incentives to improve their accounting-based compensation (i.e. bonuses). Investment reductions under the cover-up phenomenon, however, are attributed to the manager's motivation to delay their job termination or to convey to the market inside information. Hence, by examining the two phenomena under certain types of managerial departure (i.e. the horizon problem under planned CEO departures and the cover-up problem under forced CEO departures), one is able not only to detect the behaviour of investment at the time of the departure but also (and more importantly) to distinguish between the two motives. As explained below, this is one of the main contributions of the current chapter.

## 6.3 Contributions to Research

Since a detailed review of related previous studies was done in Chapter 2, this section will just provide a brief summary. Instead, the focus of the section is the limitations of existing empirical work and the ways in which the current chapter attempts to overcome some of these.

Studies of earnings management strategies - through changes in investing decisions - within the context of executive turnover are particularly limited and conflicting. Dechow and Sloan (1991) find evidence supporting that the growth in R&D expenditures is reduced during the CEOs' final years in office whilst this cut-back on investment appears to be mitigated by CEO shareholdings. Moreover, they argue that this finding is in line with the horizon expectations, since investment reductions are particularly evident when the CEO is 64 or 65 years old and hence is very close to retirement. In contrast, Gibbons and Murphy (1992) find no direct evidence in support of the prediction that managers approaching retirement reduce investment projects. In

fact, their analysis yields that investment expenditure increases rather than decreases in the years preceding CEO departures.

Finally, Murphy and Zimmerman (1993) provide a more inclusive investigation of both hypotheses by: a) addressing the issue of CEO turnover endogeneity, and b) comparing the behaviour of a number of discretionary variables (e.g. R&D, advertising expenditure, accruals etc.) between routine and non-routine CEO departures. Their analysis, however, fails to support the horizon predictions whilst it does not consistently confirm the cover-up phenomenon. For example, they find little evidence that normally retiring CEOs are cutting R&D or advertising during the year of the change, which is inconsistent with the horizon hypothesis. Similarly, they fail to find that a cover-up rationale fits non-routine departures, since firms with non-routine CEO changes do not have significantly higher accruals in the years preceding the departure than firms with routine CEO changes. In the UK, the only study that addresses these issues is an unpublished manuscript by Conyon et al. (1997) whose results on the horizon hypotheses are again inconclusive.

Although the above papers cast new light on managerial discretionary behaviour at the time of executive departures, there are still several criticisms that were fully explained in Chapter 2. The striking feature of all the above studies, however, is that they attempt to investigate the two hypotheses based on *one* sample consisting of the *total* CEO departures. Realising that this strategy does not allow one to *explain* the observed investment behaviour (i.e. do CEOs reduce investment because of the horizon problem or because of the cover-up phenomenon?), some of these studies attempted to discriminate between the two hypotheses by partitioning the sample into routine and

non-routine CEO departures based on the age variable (e.g. Murphy and Zimmerman 1993). Nevertheless, this classification strategy is very likely to lead to considerable measurement errors.

Accordingly, the current analysis provides a more powerful test of the horizon and the cover-up hypotheses than hitherto. Due to the richness of the data, this study is able to perform a rigorous classification of Most Senior Executive departures between planned and forced changes (as described in Chapter 3), and therefore to more accurately discriminate between the two hypotheses by investigating the horizon problem under planned departures and the cover-up phenomenon under forced changes. The valuable implication of the above empirical strategy is that one does not only document a pattern of investment behaviour consistent with earnings management but more importantly identifies the specific managerial incentives that stimulate such behaviour.

Secondly, the role of managerial stock ownership in discouraging managers from behaving opportunistically and in particular from cutting investment prior to their departure, is a particularly under-investigated area. The only study, most comparable to the present work, which addresses this issue is that by Dechow and Sloan (1991). The current chapter attempts to fill in this research gap by investigating whether the association between corporate investment and planned CEO departures is different for different levels of managerial stock holdings (both ordinary and option).

Finally, prior empirical literature assumes that in the absence of earnings manipulation the level of corporate investment remains unchanged over time. The current chapter departs from prior work by incorporating in the analysis an explicit theory of optimal

investment, addressing thus the argument that investment reductions may not be the result of short CEO horizons but the firm's value-maximising investment strategy. Accordingly, corporate investment is modelled based on an Euler equation approach under which optimal investment is a function of previous year's investment as well as a number of other factors (to be fully discussed at a later stage).

## 6.4 Data and Model Estimation

Similarly to Chapter 4, this chapter concentrates on the company's Most Senior Executive. Accordingly, it was drawn on a total of 318 MSE departures of the top 460 UK quoted companies from 1990 to 1998. The following section considers the empirical strategy adopted. As highlighted in Chapter 3, the construction of some of the thesis's variables was another complicated and very demanding task. Section 6.4.2 explains in details this task.

### *6.4.1 The Econometric Model*

The main hypothesis to be examined here is the behaviour of corporate investment at the years preceding and leading up to the Most Senior Executive departure[26]. Two slightly different empirical specifications were formulated. In the first one, the firm's investment rate is treated as a function of the final years of MSEs in office:

$$\left(\frac{I}{K}\right)_{it} = a + \beta_1 (MSE\,Turnover)_{it} + \beta_2 (X)_{it,t-1} + \varepsilon_{it}$$

[26] Note that the study models the *level* of investment as well as the *change* in investment. For reasons of simplicity the discussion in this section focuses on the first version. More details on this are given in Section 6.5.

In order to compare the current findings with those of earlier work, two different versions of the above model were estimated. In the first one, analysis is restricted to the "transition" year (i.e. the year of the change) and hence, the dummy variable MSE turnover equals to one (1) if the company's Most Senior Executive is not disclosed in the firm's top management team in year t+1 and zero (0) otherwise (e.g. Murphy and Zimmerman 1993). In the second one, the dummy indicator combines the two final years in office. It therefore, equals to one (1) if the Most Senior Executive is at the change year or the last full year in office, i.e. the year preceding the turnover (e.g. Dechow and Sloan 1991; Conyon et al. 1997) and zero (0) otherwise. In both cases, and according to Hypotheses 1 and 3, the expected sign of the MSE turnover dummy is negative.

X denotes a number of potential predictors of corporate investment. More specifically, there are three alternative scenarios for X:

1. $X = 0$, in this case it is assumed that – in the absence of manipulation - investment is constant over time. That is, there is no explicit investment theory.
2. $X = SHR_{t-1}$, in this case it is assumed that investment is associated with share profitability. Specifically, as Murphy and Zimmerman (1993) argue if the firm is not doing well, the net present value of future payoffs to current investment expenditure is likely to be low. In other words, if a decrease in the demand for the firm's products results in both lower profits and lower marginal productivity of investment expenditure, then investment expenditure is likely correlated with firm performance. Note that investment may be positively associated with both current and lagged share profitability. This study used lagged performance in order to minimise

potential endogeneity problems; whilst this year's poor share performance may lead to less investment, such an event may also affect current performance.

3. $X = \left(\frac{I}{K}\right)_{t-1} + \left(\frac{I}{K}\right)^{2}_{t-1} + \left(\frac{C}{K}\right)_{t-1} + \left(\frac{Y}{K}\right)_{t-1} + \left(\frac{B}{K}\right)^{2}_{t-1}$, in this case investment is modelled based on the Euler equation that will be further discussed in Section 6.4.2. This three-step investigation will be considered in detail in Section 6.5.

In the second approach, the behaviour of corporate investment is analysed over the MSE's career. In particular, investment is analysed in the transition year and the five fiscal years preceding the transition year. Similar to the first approach, the aim of the test is to compare the investment decisions of those MSEs who leave office with those who do not depart. The main difference between the two approaches is that the second one investigates the behaviour of corporate investment over a longer time-horizon than the first one. Hence:

$$\left(\frac{I}{K}\right)_{it} = a + \beta_1(fifth\ year)_{it}, + \beta_2(fourth\ year)_{it}, \ldots + \beta_6(transition\ year)_{it} + \beta_7(X)_{it} + \varepsilon_{it}$$

In this model, fifth year denotes a dummy equal to one (1) if the company's MSE is five years from departure and zero (0) otherwise, fourth year denotes a dummy equal to one (1) if the company's MSE is four years from departure and zero (0) otherwise, etc. This empirical specification addresses mainly the fact that investment expenditure are gradually reduced in the years leading up to the CEO departure, although they may be concentrated in the final one or two years. This could be due to two fundamental reasons. Firstly, managers may anticipate their departure, but do not know well in

advance how long they will still be in office, such as in the case of forced departures. Secondly, it is often the case that the benefits of certain types of investment – e.g. capital expenditure – may be delayed for years; as a result, the optimal timing of cutbacks in investment expenditure for an opportunistic CEO approaching departure is not necessarily confined to the transition year. A five-year CEO horizon was chosen not only to make results comparable with those of the previous studies but also because UK CEOs typically serve in office for five years; the average tenure of the sample's MSEs is 5.4 years.

The discussion in Section 6.2 emphasised that the horizon problem is predicted to be more pronounced in the case of anticipated executive departures whereas the cover-up hypothesis is more likely to be associated with forced turnover. Accordingly, all regressions were estimated based on the full sample of MSE departures under three definitions of management change: a) all MSE changes, b) forced MSE changes, and c) planned MSE changes. The composition of forced and planned samples was extensively discussed in Chapter 3. In summary, forced changes include departures because of policy or personality disagreements, poor performance, scandals etc. whilst planned departures consist of non-forced retirements and normal successions.

To examine the incentive-alignment role of stock compensation, three measures of stock holdings were applied (variable coding in parentheses):

a) The fraction of ordinary shares of the total number of company equity owned by the Most Senior Executive (ORDINARY).
b) The fraction of incentive shares of the total number of company equity owned by the Most Senior Executive (OPTION).

c) The value of the MSE ordinary stock holdings (VALUE) calculated as:

$$Value = Share\ \Pr ice * Number\ of\ Ordinary\ Shares$$

As mentioned, corporate investment rate $\left(\frac{I}{K}\right)$ is modelled based on the Euler equation for optimal capital accumulation in the presence of convex adjustment costs (Blundell, Bond and Meghir 1996). More details on the empirical model of investment are given below.

### *6.4.2 Dynamic Investment Models*

Chapter 2 provided a review of the economic theory on company investment and in particular, of the modern investment literature, which during the last decade has been dominated by three main structural models: a) the Q model with the work of Summers (1981) and Hayashi (1982); b) the Abel and Blanchard (1986) present value model; and c) the Euler equation model that was first developed in the investment literature by Abel (1980).

Whilst all three structural investment models are based on the same theoretical foundations, the current study adopted the Euler equation approach mainly because - from an empirical point of view - this model has two important advantages. Firstly, it provides a theoretical motivation for assuming limited serial correlation in the error term ($e_{it}$), which may be important for identification when the model is estimated using short panels (the case of this study). Secondly, under the Q model the construction of the company investment rate requires a market value for the firm's equity, which -

based on the assumption that the stock market is strongly efficient – can be estimated by using stock prices. Calculations, however, could be seriously misleading if the above assumption does not hold. Accordingly, the Euler equation avoids these complications by estimating the investment rate based on accounting data rather than stock market valuations (Blundell et al. 1996). A fuller treatment of this model is included in the current and the following sections.

The Euler equation is a dynamic investment model, i.e. it introduces some level of capital stock dependence on the previous period most commonly through adjustment costs. The primary assumptions of this model can be summarised as follows:

- The firm's objective is to maximise the shareholders' wealth, i.e. the expected present value of the firm's net cash flows.
- Shareholders are risk neutral.
- It is a tax-free world.
- There is no debt or constraints on use of new equity.

In its maximisation process, however, the firm faces two constraints. Firstly, the capital stock identity, which is equal to investment less depreciation, where the replacement is assumed to be proportional to capital stock. This can be written as:

$$K_t = K_{t-1} * \left(1 - \delta^i\right) * + I_t$$

where $K_t$ represents the replacement cost of capital stock in period t, $I_t$ denotes new investment in period t and, $\delta$ represents the economic depreciation rate. Stated another way, investment can be decomposed into the investment for capital expansion and the

investment for replacement. New investment acquired is assumed to be productive immediately, but the company faces strictly convex adjustment costs (e.g. installation costs) in changing its capital stock. Secondly, there exist certain technological constraints, summarised by the firm's production function.

The mathematical solution of the above dynamic optimisation problem is beyond the scope of the thesis. In summary, the standard investment model derived from the problem prescribes that - under the assumption of perfect competition - current investment is related to last period's investment and the marginal revenue product of capital. The Euler equation was used - among others - by Bond and Meghir (1994), who in their analysis allow for imperfect competition and for the non-separability between investment and borrowing decisions.

Following their procedure, this study measured the investment variable by the ratio of gross investment to the replacement cost value of capital, both expressed at current year prices. Specifically, the investment rate was estimated as follows:

$$\left(\frac{I}{K}\right)_{it} = \alpha + \beta_1\left(\frac{I}{K}\right)_{i,t-1} + \beta_2\left(\frac{I}{K}\right)^2_{i,t-1} + \beta_3\left(\frac{C}{K}\right)_{i,t-1} + \beta_4\left(\frac{Y}{K}\right)_{i,t-1} + \beta_5\left(\frac{B}{K}\right)^2_{i,t-1} + \varepsilon_{it}$$

In the above model, current investment $(I/K)_t$ is predicted to be positively related with last year's investment $(I/K)_{t-1}$ and inversely related with the lagged investment squared $(I/K)^2_{t-1}$; in both cases the value of the coefficient is expected to be greater than one. The lagged cash flow term $(C/K)_{t-1}$ - used to measure the marginal product of capital - is predicted to be negative. The lagged sales variable $(Y/K)_{t-1}$ - used to control for the

presence of imperfect competition in the product market - is predicted to be positive if not eliminated from the Euler equation under the assumption of perfect competition. Finally, the debt term $(B/K)^2_{t-1}$ - used to control for the effect of the company's capital structure - is expected to be positive if not eliminated under the Modigliani-Miller debt irrelevance argument (i.e. the company is indifferent to the choice of the appropriate level of debt, since there are no bankruptcy costs and no tax advantages of debt).

The above variables were all selected from Datastream. This section concentrates on the construction of the variables rather than their collection. Their full definitions were already given in Chapter 3. In summary, I is total purchases of new fixed assets (435 and 1024)[27], Y is total sales (104), B is total debt repayable after one year (321) and C denotes the level of cash flow from operations and is measured by the sum of adjusted operating profit (137) and depreciation (136). Finally, K denotes net capital stock at *replacement cost*. The construction of the latter variable was particularly complicated, since only historical values of capital stock are available. Hence, net capital stock at replacement cost was assembled according to the following three-step procedure:

Firstly, historical cost capital stock figures are available for plant & machinery and land & buildings separately. The change in historical cost gross total fixed assets was used to estimate the breakdown of investment according to:

$$I_t^P = I_t * \left[ \frac{GVP_t - GVP_{t-1}}{(GVP_t - GVP_{t-1} + GVB_t - GVB_{t-1})} \right] \text{ and } I_t^B = I_t - I_t^P,$$

[27] Datastream item numbers in brackets.

where $GVP_t$ is the gross book value of plant & machinery in year t (328), $GVB_t$ is the gross book value of land & buildings in year t (327), and $I_t^P$ and $I_t^B$ denote the estimated value of investment in plant & machinery and land & buildings respectively. The above figures were also collected from Datastream.

Secondly, the replacement cost valuation of each type of fixed asset was then calculated from the iterative perpetual inventory formula. In this approach an estimate of the previous period's net capital stock at replacement cost is adjusted for depreciation, inflation, and new investment during the current period to obtain an estimate for the current period. Thus, the replacement cost of plant & machinery and land & buildings was separately estimated as follows:

$$K_t^P = K_{t-1}^P * (1 - \delta^P) * \left( \frac{p_t}{p_{t-1}} \right) + I_t^P$$

$$K_t^B = K_{t-1}^B * (1 - \delta^B) * \left( \frac{p_t}{p_{t-1}} \right) + I_t^B$$

where:

- $K_t^P$ = replacement cost of plant & machinery
- $K_t^B$ = replacement cost of land & buildings
- $\delta$ denotes the appropriate depreciation rate: the depreciation rates could be firm specific and need not be constant through time for each firm. This analysis attempted to calculate depreciation rates from accounting data. In the majority of the cases, however, estimations produced meaningless numbers (i.e. extremely high depreciation rates or even negative rates). Hence, similarly to Bond and Meghir (1994), the rate used is 8.19% for plant & machinery and 2.5% for land & building.

Both rates were taken from the estimates provided by King and Fullerton (1984) for UK manufacturing.

- $p$ is the investment goods price index used as an implicit deflator. This is measured by the ratio of the total UK capital stock in current prices to the total UK capital stock in 1995 prices.

To obtain starting values for the above procedure it was assumed that the replacement cost valuation of plant & machinery and land & buildings equals the net book value of each type of asset (699 and 698 respectively) for the first year of data available. Net book values of plant & machinery and land & buildings were obtained from Datastream. Note, that the starting year for the construction of the capital stock at replacement cost is 1968 or the first available year of the company if later.

Finally, the replacement cost valuation of total fixed assets was estimated as follows:

$$K_t = K_t^{P} + K_t^{B}$$

All investment determinants as illustrated in the Euler equation were then divided by the replacement cost of capital stock in order to get the appropriate ratios. Accordingly, I/K is the investment rate (INVESTMENT)[28], C/K is the cash flow ratio (CASH FLOW), Y/K is the sales ratio (SALES) and B/K is the debt ratio (DEBT).

Table 6.1 shows the number of firm-years, all, forced and planned MSE changes. As shown, although the sample used in this chapter is the same as the one in Chapter 4, the

[28] Variable codings in parentheses.

number of observations is slightly less. To eliminate the effect of outliers on the estimates, a number of observations were dropped if the cash flow ratio exceeded 5, the sales ratio exceeded 50 and the debt ratio exceeded 15. Consequently, the total number of all Most Senior Executive changes included is 315, of which 134 are forced departures and 98 are planned changes (instead of 318 total MSE changes, 135 forced and 100 planned changes-see Table 4.2).

**Table 6.1: Sample Firms, All, Forced and Planned MSE Changes by Year, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Year | Number of firms | All changes | Forced changes | Planned changes |
|---|---|---|---|---|
| 1990 | 367 | 13 (3.5%) | 5 (1.4%) | 4 (1.1%) |
| 1991 | 379 | 37 (9.8%) | 18 (4.7%) | 7 (1.8%) |
| 1992 | 374 | 46 (12.3%) | 19 (5.1%) | 20 (5.3%) |
| 1993 | 376 | 43 (11.4%) | 16 (4.3%) | 15 (4.0%) |
| 1994 | 382 | 33 (8.6%) | 16 (4.2%) | 13 (3.4%) |
| 1995 | 387 | 42 (10.9%) | 14 (3.6%) | 12 (3.1%) |
| 1996 | 377 | 37 (9.8%) | 14 (3.7%) | 12 (3.2%) |
| 1997 | 368 | 45 (12.2%) | 20 (5.4%) | 13 (3.5%) |
| 1998 | 352 | 19 (5.4%) | 12 (3.4%) | 2 (0.6%) |
| **Total** | **3362** | **315 (9.4%)** | **134 (4.0%)** | **98 (2.9%)** |

Descriptive statistics of the study's variables are presented in Table 6.2. Similarly to Chapter 4, the mean shareholder return is 0.064. The mean investment rate is 0.121 and the mean cash flow ratio is 0.32. The average values for the sales ratio and the debt ratio are 2.6 and 0.4 respectively. Finally, Most Senior Executives hold on average 2.3% and 0.2% of the company's total equity in ordinary and incentive stocks respectively. The mean value of these ordinary stock holdings is estimated at about £10m.

**Table 6.2: Summary Statistics of All Independent Variables, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Variable | Observations | Mean | Std. Dev. | Min. | Max. |
|---|---|---|---|---|---|
| SHR | 3271 | 0.064 | 0.406 | -3.993 | 1.760 |
| INVESTMENT | 2524 | 0.121 | 0.105 | 0.002 | 0.978 |
| CASH FLOW | 2730 | 0.326 | 0.516 | -2.779 | 4.950 |
| SALES | 2585 | 2.607 | 3.528 | 0.009 | 47.58 |
| DEBT | 2619 | 0.403 | 0.867 | 0.000 | 11.52 |
| STAKE | 3289 | 0.023 | 0.089 | 0.000 | 0.894 |
| OPTION | 3340 | 0.002 | 0.016 | 0.000 | 0.667 |
| VALUE | 3226 | 9,647,921 | 6.15e+07 | 0.000 | 1.78e+09 |

Finally, the standard Pearson correlation coefficients between the study's continuous independent variables are shown in Table 6.3.

**Table 6.3: Standard Pearson Correlations of Independent Variables, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| | $Investment_{t-1}$ | $Cash\ Flow_{t-1}$ | $Sales_{t-1}$ | $Debt_{t-1}^2$ | $SHR_{t-1}$ | Stake | Option |
|---|---|---|---|---|---|---|---|
| **$Investment_{t-1}$** | - | | | | | | |
| **$Cash\ Flow_{t-1}$** | 0.24 | - | | | | | |
| **$Sales_{t-1}$** | 0.20 | 0.59 | - | | | | |
| **$Debt_{t-1}^2$** | 0.14 | 0.36 | 0.19 | - | | | |
| **$SHR_{t-1}$** | 0.06 | 0.10 | -0.03 | 0.01 | - | | |
| **Stake** | 0.17 | 0.18 | 0.25 | 0.07 | 0.03 | - | |
| **Option** | 0.00 | 0.00 | 0.00 | 0.00 | -0.04 | 0.09 | - |

As indicated, the majority of the variables are not considerably associated with each other. The only exception to the above is the correlation between cash flow and sales, which appears relatively high (0.59). However, the use of fixed effects - that incorporate the effect of possible omitted variables (to be discussed in Section 6.5) - may reduce co-linearity, since adding a variable that was incorrectly excluded could markedly reduce the estimate of the error variance and hence result in lower estimated variances

of all coefficient estimates (Kennedy 1998). In addition, the transformation of the variables through first differencing the Euler investment equation (also discussed in Section 6.5) often reduces the severity of co-linearity, because although variables $X_1$ and $X_2$ may be correlated, there is no a priori reason to believe that their differences will also be correlated (Maddala 2001).

## 6.5 Specification Issues

Prior to the presentation and discussion of results, it is worth addressing a couple of important methodological issues relevant to this study. First of all, in order to make results comparable with those of previous papers, the *change* in the company's investment rate rather than the *level* of investment was initially adopted as the basic dependent variable (Dechow and Sloan 1991; Murphy and Zimmerman 1993). This was calculated as follows:

$$\Delta\left(\frac{I}{K}\right)_{it} = \left(\frac{I}{K}\right)_{it} - \left(\frac{I}{K}\right)_{it-1}$$

Moreover, the current study followed a three-step investigation of the behaviour of corporate investment. In particular, consistent with prior literature (e.g. Dechow and Sloan 1991; Gibbons and Murphy 1992) the study began with the assumption that, in the absence of manipulation, the expected change in investment expenditure is constant over time. Hence the model under investigation is:

$$\Delta\left(\frac{I}{K}\right)_{it} = a + \beta_1 \left(MSE\ Turnover\right)_{it} + \varepsilon_{it} \quad \text{(a)}$$

The analysis then continued by relaxing the above assumption and arguing that, share profitability can be a potential predictor of investment. The model, in this case, is:

$$\Delta\left(\frac{I}{K}\right)_{it} = a + \beta_1 (MSE\,Turnover)_{it} + \beta_2 (SHR)_{it-1} + \varepsilon_{it} \qquad \text{(b)}$$

Note, that the above model was also considered when the dependent variable is the *level* of investment. Finally, the analysis argues that in order to investigate investment manipulation, one needs a richer theory concerning the optimal level of investment. In fact, it is argued that the optimal investment level of a firm can be estimated by the Euler equation, which predicts that this year's investment depends on last year's investment as well as a number of other possible determinants (as shown in Section 6.4.2). In this case, the estimated model is:

$$\left(\frac{I}{K}\right)_{it} = \alpha + \beta_1 (MSE\,Turnover)_{it} + \beta_2 \left(\frac{I}{K}\right)_{i,t-1} + \beta_3 \left(\frac{I}{K}\right)^2_{i,t-1} + \ldots + \beta_7 (SHR)_{i,t-1} + \varepsilon_{it} \qquad \text{(c)}$$

The variables incorporated in the Euler framework are unlikely to satisfy strict exogeneity and may well be correlated with contemporaneous disturbances. Firm specific effects may be present as a result of technological heterogeneity and may be correlated with the rest investment determinants. Both OLS in levels and within groups estimators are therefore likely to be inappropriate. Accordingly, to estimate the Euler dynamic model consistently from a short and unbalanced panel this study uses a Generalised Method of Moments estimator (Bond and Meghir 1994; Blundell et al. 1996). First differencing the Euler equation removes the firm specific effect and produces an equation that is estimable by instrumental variables. Arellano and Bond

(1991) derived a GMM estimator using lagged levels of the dependent variable, and the predetermined variables and differences of the strictly exogenous variables (known as the Arellano-Bond dynamic panel data estimator).

This methodology assumes that there is no second-order autocorrelation in the first-differenced idiosyncratic errors (Arellano and Bond 1991). Accordingly, a test for second-order autocorrelation and the Sargan test of over-identifying restrictions for these models are provided. Arellano and Bond (1991) recommend using the one-step results for inference on the coefficients. However, the two-step Sargan test is more reliable for inference on model specification. For this reason, coefficient estimates are reported using the one-step model whilst the Sargan test is derived from the two-step model. All investment specifications provide standard errors that have a stationary covariance matrix. This adjustment was made using the White (1980) method. Time-specific and industry specific effects are included in all regression models.

Finally, it is worth commenting that likewise the rest of the investment predictors, MSE turnover may well be endogenous for many reasons. One such reason is the correlation between MSE turnover, and in particular of forced MSE turnover, and share performance (as indicated in Chapter 4). In this case, it may be difficult to disentangle the effects of poor performance from the effects of discretionary behaviour and that's the study's main limitation.

## 6.6 Results and Interpretations

This section begins with the presentation of some descriptive evidence on corporate investment and share performance at the time of MSE departure. It then continues with

more rigorous econometric analysis of the association between investment expenditure and MSE turnover. Finally, it finishes with the empirical investigation of the horizon problem in different sub-groups of planned MSE departures (i.e. outgoing MSEs with low and high equity stakes). Table 6.4 reports the behaviour of the investment rate (INV) and share performance (SPRF) during the tenure of a Most Senior Executive.

An observation based on the raw data of this table is that the level of investment falls as we approach the year the MSE turnover takes place, although rates are not monotonically decreasing. Specifically, the investment ratio falls from 0.136 in the last fifth year to 0.102 in the transition year for all changes; from 0.132 to 0.078 for forced departures and from 0.139 to 0.125 for planned changes. Moreover, the p-value of the t-statistic for the difference in the mean values is 0.592 for planned departures and 0.004 for forced departures. Descriptive evidence, therefore, suggests that CEOs approaching a forced departure are likely to reduce investment during their last years in office in order to delay their job termination. The horizon problem – however - seems not to be particularly acute, since normally retiring MSEs decrease investment but these reductions do not appear to be significant.

A second observation based on Table 6.4 and consistent with the discussion in the previous sections is that firm performance seems to be correlated with both corporate investment and executive turnover, i.e. share performance also falls as we approach the departure year. As expected, this declining trend is particularly strong under forced changes where shareholder returns drop from 0.021 in the last fifth year to –0.274 in the year of change. In the case of planned departures firm performance in the last two years

is higher compared with the rest years; shareholder returns increase from 0.082 in the last fifth year to 0.142 and 0.108 in the last full year and the transition year respectively.

**Table 6.4: Average Investment Rate and Share Performance by Years Left in Office for All, Forced and Planned MSE Changes, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Years left in office | All changes | | Forced changes | | Planned changes | |
|---|---|---|---|---|---|---|
| | INV | SPRF | INV | SPRF | INV | SPRF |
| 5 | 0.136 | 0.085 | 0.132 | 0.021 | 0.139 | 0.082 |
| 4 | 0.106 | 0.145 | 0.090 | 0.137 | 0.139 | 0.119 |
| 3 | 0.129 | 0.059 | 0.118 | 0.040 | 0.130 | 0.100 |
| 2 | 0.137 | 0.053 | 0.130 | 0.050 | 0.142 | 0.043 |
| 1 | 0.124 | 0.031 | 0.118 | -0.081 | 0.130 | 0.142 |
| 0 | 0.102 | -0.071 | 0.078 | -0.274 | 0.125 | 0.108 |

**NOTE:** INV: Level of investment rate, SPRF: Share performance

### *6.6.1 Corporate Investment during the Final Years of the MSE*

Tables 6.5 and 6.6 present the econometric findings based on the first empirical specification of the study, i.e. where the company's investment rate was estimated as a function of the final years of Most Senior Executives in office. Models (1) to (5) of both Tables depict the first version of this empirical specification where the MSE turnover dummy refers to the departure year and only whereas in Model (6) the dummy variable combines the last two years in office.

As explained in Section 6.5, the current analysis commenced under the assumption that there is no underlying investment theory (i.e. Model (1)). It then introduced share profitability as a potential investment predictor (i.e. Model (2) where the dependent variable is the *change* in the company's investment rate or Model (3) where the dependent variable is the *level* of investment rate). In all the above models coefficients

were estimated by ordinary-least-squares (OLS) regressions. Finally, the analysis adopted the Euler approach and hence progressively introduced the appropriate predictors of the *level* of the investment rate (i.e. Models (4), (5) and (6) where coefficients were estimated by generalised instrumental variables). In fact, Model (3) serves as an intermediate stage between Models (1)-(2) & (4)-(5). Table 6.5 shows the results from estimating (progressively more detailed) investment equations for the *total* sample of MSE changes.

**Table 6.5: Estimated Coefficients Relating Investment Expenditure to All MSE Departures, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Dependent Variable | Change in Investment | | Level of Investment | | | |
|---|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Transition Year | -0.016 | -0.014 | -0.003 | -0.008 | -0.006 | - |
| | (0.000) | (0.002) | (0.459) | (0.242) | (0.296) | |
| Last 2 Years in Office | - | - | - | - | - | -0.010 |
| | | | | | | (0.031) |
| $SHR_{t-1}$ | - | 0.017 | 0.049 | 0.014 | 0.015 | 0.015 |
| | | (0.009) | (0.000) | (0.166) | (0.091) | (0.086) |
| $Investment_{t-1}$ | - | - | - | 1.531 | 1.192 | 1.186 |
| | | | | (0.000) | (0.001) | (0.001) |
| $Investment^2_{t-1}$ | - | - | - | -1.807 | -1.400 | -1.391 |
| | | | | (0.003) | (0.005) | (0.005) |
| $Cash\ Flow_{t-1}$ | - | - | - | - | 0.036 | 0.036 |
| | | | | | (0.241) | (0.236) |
| $Sales_{t-1}$ | - | - | - | - | 0.006 | 0.006 |
| | | | | | (0.229) | (0.224) |
| $Debt^2_{t-1}$ | | | - | - | -0.000 | -0.000 |
| | | | | | (0.703) | (0.722) |
| Constant | 0.016 | -0.061 | 0.102 | 0.013 | 0.007 | 0.007 |
| | (0.131) | (0.003) | (0.000) | (0.057) | (0.205) | (0.174) |
| Time Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Serial Correlation(p) | - | - | - | 0.226 | 0.523 | 0.539 |
| Sargan (p) | - | - | - | 0.474 | 0.648 | 0.641 |
| Observations | 2143 | 2137 | 2440 | 1785 | 1669 | 1669 |

**NOTES:**

1. p-values in parentheses
2. Models 1, 2 & 3 run through OLS; Models 4, 5 & 6 run through GMM
3. Model 1 corresponds to equation (a); Models 2 & 3 correspond to equation (b); Models 4, 5 & 6 correspond to equation (c).

Model (1), which is the simplest investment model, reveals a negative and significant correlation between growth in the investment ratio and the departure year; the estimate on the dummy variable is – 0.016 and significant at less than the 1% level. Model (2) shows that part of this correlation arises because of the company's profitability which also declines; $SHR_{t-1}$ enters with a positive coefficient 0.017 and is significant at less than the 1% level. The coefficient on the transition year dummy slightly decreases but remains negative and statistically significant. The shift from the *change* to the *level* of the corporate investment rate in Model (3) results in a negative, albeit insignificant, departure year effect. So, without a proper model (e.g. Euler model), changes – as opposed to levels - are probably a better approximation to investment behaviour. But one needs a richer theoretical investment model in order to make valid inferences.

The Euler equations begin with the inclusion of the lagged dependent variable and its square in Model (4) (investment dynamics). In this case, the effect of the departure year remains negative but is still insignificant at conventional levels. Model (5) presents results from estimating the full Euler equation for investment developed by Bond and Meghir (1994) and the main finding is maintained. According to this model, growth in investment rate is predicted to fall by 0.6 percentage points if the top executive is at the year of the change, but this reduction is not statistically significant. In contrast with Model (5), in Model (6) the dummy variable (which now refers to the last two years in office, including the transition year) enters with a negative sign of 0.010 and is significant at less than the 5% level. Moreover, it should be noted that the autoregressive dynamics implied by the Euler approach are strongly consistent with the data; the estimated coefficients of both the $Investment_{t-1}$ and $Investment^2_{t-1}$ variables are of the hypothesised sign and size and significant at less than the 1% level. This finding holds throughout the entire analysis. Consequently, it seems that the suggested

theoretical model of investment can, to some extent, explain variations in company investment rates.

Overall, results regarding investment behaviour at the time of MSE departure are not clear-cut. According to the Euler model there is evidence that the transition year has no effect on investment. In contrast, the last 2 years in office have a significant and negative effect. More importantly, the above negative turnover effect is in line with both the horizon and the cover-up hypotheses.

As highlighted in Section 6.3, in order to discriminate between the two arguments one should test for certain classes of discretionary behaviour (i.e. the horizon hypothesis and the cover-up hypothesis) in the context of certain types of executive departures (i.e. under planned and forced departures respectively). For this reason, all the above investment equations were estimated under both the definitions of planned and forced changes. Results are presented in Table 6.6.

As shown, in the case of planned departures the coefficient of the transition year dummy is negative or zero, yet highly insignificant under *all six empirical specifications*. Evidence, therefore suggests that short executive horizons due to retirement or normal succession do not seem to be associated with reduced investment. This is in contrast with the findings of Dechow and Sloan (1991) who conclude that retiring CEOs are likely to decrease R&D expenditure in their final years. This difference could be attributed mainly to the fact that in the current study the construction of the planned departures sample is based on a variety of information from the FT articles and not only on the age variable as in the study of Dechow and Sloan.

Results are, however, consistent with Gibbons and Murphy (1992) and Murphy and Zimmerman (1993) who also fail to support the horizon hypothesis.

**Table 6.6: Estimated Coefficients Relating Investment Expenditure to Planned and Forced MSE Departures, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Dependent Variable | Change in Investment | | Level of Investment | | | |
|---|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Planned Transition Year | -0.003 | -0.002 | -0.001 | 0.001 | -0.000 | - |
| | (0.680) | (0.747) | (0.881) | (0.936) | (0.986) | |
| Forced Transition Year | -0.030 | -0.025 | -0.013 | -0.024 | -0.015 | - |
| | (0.000) | (0.000) | (0.107) | (0.019) | (0.068) | |
| Planned Last 2 Years in Office | - | - | - | - | - | -0.005 |
| | | | | | | (0.649) |
| Forced Last 2 Years in Office | - | - | - | - | - | -0.013 |
| | | | | | | (0.076) |
| $SHR_{t-1}$ | - | 0.015 | 0.048 | 0.013 | 0.015 | 0.015 |
| | | (0.017) | (0.000) | (0.203) | (0.094) | (0.081) |
| $Investment_{t-1}$ | - | - | - | 1.545 | 1.194 | 1.189 |
| | | | | (0.000) | (0.000) | (0.000) |
| $Investment^2_{t-1}$ | - | - | - | -1.821 | -1.401 | -1.391 |
| | | | | (0.002) | (0.004) | (0.004) |
| $Cash\ Flow_{t-1}$ | - | | - | - | 0.034 | 0.036 |
| | | | | | (0.258) | (0.236) |
| $Sales_{t-1}$ | - | | - | - | 0.006 | 0.006 |
| | | | | | (0.226) | (0.229) |
| $Debt^2_{t-1}$ | - | | - | - | -0.000 | -0.000 |
| | | | | | (0.757) | (0.712) |
| Constant | -0.067 | -0.062 | 0.136 | 0.002 | 0.003 | 0.003 |
| | (0.001) | (0.002) | (0.000) | (0.092) | (0.136) | (0.113) |
| Time Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Serial Correlation(p) | - | - | - | 0.271 | 0.593 | 0.586 |
| Sargan (p) | - | - | - | 0.446 | 0.638 | 0.645 |
| Observations | 2141 | 2135 | 2438 | 1783 | 1668 | 1668 |

**NOTES:**

1. p-values in parentheses
2. Models 1, 2 & 3 run through OLS; Models 4, 5 & 6 run through GMM
3. Model 1 corresponds to equation (a); Models 2 & 3 correspond to equation (b); Models 4, 5 & 6 correspond to equation (c).

In contrast with planned departures, the estimate of the forced transition year dummy is negative and significant not only under Models (1) and (2) but also under the Euler

specification; the only exception is Model (3) in which the estimate fails at the 10% level. In particular, Model (1) shows that managers threatened to lose their job tend to reduce the investment growth rate. The coefficient of the dummy indicator is –0.030 and significant at less than the 1% level. Model (2) reveals that some of this reduction is driven by the firm's performance; $SHR_{t-1}$ enters with a positive and significant sign whereas the transition dummy is slightly less negative. Model (4) adds in investment dynamics whilst estimates from the full Euler equation for investment are presented in Model (5). According to these findings, the company's investment rate will decrease by 2.4 percentage points (Model 4) or by 1.5 percentage points (Model 5) if the top executive is at the year of departure. This finding is maintained when the two last years in office are combined in one dummy variable (Model 6); the coefficient of the dummy variable is negative (-0.013) and significant at the 10% level. Again, share performance remains a significant predictor of company investment. Overall, results suggest that CEOs approaching a forced departure are likely to reduce the company's investment, supporting thus the cover-up hypothesis. This is in line with the results of Murphy and Zimmerman (1993) whose analysis confirms that CEOs cover-up, although not consistently.

But are these effects important in an economic sense? According to Model (5) investment is predicted to fall by 0.015 if the Most Senior Executive is at the departure year. Compared to the mean investment rate of 0.132 in the fifth year prior to departure, this corresponds to an 11% lower investment rate. Similarly, Model (6) predicts that the investment rate will fall by 0.013 if the MSE is at the two final years in office, corresponding to a 10% lower investment rate compared to the earlier years of an executive's career.

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So far, analysis has demonstrated that MSEs approaching departure are likely to reduce the company's investment expenditure. Moreover, econometric results seem to support the cover-up phenomenon whilst they fail to confirm the horizon hypothesis. That is, MSEs approaching a forced departure are inclined to reduce investment in order to increase accounting earnings and hence delay their job termination or signal to the market inside information. Retiring MSEs, on the other hand, or those who approach a normal succession do not seem to engage in opportunistic behaviour. These claims are further investigated in the following section.

### *6.6.2 Corporate Investment as a Function of the Entire MSE Career*

In Tables 6.7-6.9 investment is modelled as a function of the last five years of top executives. This could address the possibility that some managers may not know well in advance how long they will stay in office and also that reductions in investment expenditure may start a lot earlier than the last two years. Similar to Tables 6.5 and 6.6, Model (1) does not assume any underlying investment theory, Models (2) and (3) add in share performance (estimates in all the above models were estimated by OLS) whilst Models (4) and (5) adopt the Euler approach (estimates were estimated by GMM). Table 6.7 presents results for the entire sample of Most Senior Executive changes.

Findings in Model (1) reveal that the growth rates of investment decline as the Most Senior Executive approaches departure; coefficient estimates are progressively less positive during the last four years from change whilst they become negative in the last full year and the transition year. Model (2) shows that some of this reduction is caused by the overall performance of the firm; a marginal decrease in prior year's performance will lead to a 1.6 percentage points decrease in the investment growth rate.

**Table 6.7: Estimated Coefficients Relating Investment Expenditure to All MSE Departures over the Entire MSE Career, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Dependent Variable | Change in Investment | | Level of Investment | | |
|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| T=-5 | 0.024 | 0.023 | -0.015 | 0.033 | 0.020 |
| | (0.044) | (0.057) | (0.169) | (0.103) | (0.279) |
| T=-4 | 0.016 | 0.015 | -0.014 | 0.013 | 0.012 |
| | (0.046) | (0.054) | (0.119) | (0.329) | (0.295) |
| T=-3 | 0.021 | 0.021 | -0.004 | 0.023 | 0.021 |
| | (0.003) | (0.003) | (0.563) | (0.065) | (0.056) |
| T=-2 | 0.011 | 0.011 | 0.004 | 0.010 | 0.011 |
| | (0.062) | (0.064) | (0.536) | (0.252) | (0.148) |
| T=-1 | -0.009 | -0.009 | -0.003 | -0.007 | -0.003 |
| | (0.067) | (0.080) | (0.563) | (0.404) | (0.578) |
| T=0 | -0.015 | -0.012 | -0.004 | -0.011 | -0.007 |
| | (0.001) | (0.006) | (0390) | (0.156) | (0.214) |
| $SHR_{t-1}$ | - | 0.016 | 0.049 | 0.014 | 0.015 |
| | | (0.010) | (0.000) | (0.166) | (0.089) |
| $Investment_{t-1}$ | - | - | - | 1.520 | 1.182 |
| | | | | (0.000) | (0.001) |
| $Investment^2_{t-1}$ | - | - | - | -1.791 | -1.386 |
| | | | | (0.003) | (0.005) |
| Cash $Flow_{t-1}$ | - | - | - | - | 0.036 |
| | | | | | (0.238) |
| $Sales_{t-1}$ | - | - | - | - | 0.006 |
| | | | | | (0.228) |
| $Debt^2_{t-1}$ | - | - | - | - | -0.000 |
| | | | | | (0.711) |
| Constant | 0.012 | -0.064 | 0.106 | 0.013 | 0.007 |
| | (0.208) | (0.002) | (0.000) | (0.052) | (0.202) |
| Time Effects | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes |
| Serial Correlation(p) | - | - | - | 0.239 | 0.561 |
| Sargan (p) | - | - | - | 0.461 | 0.645 |
| Observations | 2143 | 2137 | 2440 | 1785 | 1669 |

**NOTES:**

1. p-values in parentheses
2. Models 1, 2 & 3 run through OLS; Models 4 & 5 run through GMM
3. Model 1 corresponds to equation (a); Models 2 & 3 correspond to equation (b); Models 4 & 5 correspond to equation (c).

Moreover, the magnitude of the year dummies is slightly smaller; estimates, however, are still significant and follow a declining trend. In both Models (1) and (2) the estimates of the "transition-year" (i.e. t=0) and the "last full-year" (i.e. t=-1) are

significantly different from the estimates of the rest year dummies (the p-values of the $\chi^2$-statistic for the difference in the estimates are less than 0.010) indicating that most of the investment cutbacks tends to concentrate in the final two years.

When the dependent variable is the level of the company's investment rate (i.e. Models (3)-(5)), almost all the coefficient estimates become insignificant. For example, under the full Euler specification (see Model 5) the time dummies still follow a declining pattern, albeit not significant. Similar to Table 6.5, results here are inconclusive. According to the Euler model, however, there seems to be no declining trend in corporate investment in the years preceding the MSE turnover. Yet, it may be the case that investment reductions are likely to be stronger under specific circumstances. Accordingly, Table 6.8 replicates the above regressions for planned Most Senior Executive departures.

The results are summarised as follows. Firstly, there seems to be no particular trend in the size of the coefficients of the year dummies. Secondly, and more importantly, almost all estimates are not significant at conventional levels *under all investment specifications.* In contrast, it is suggested that the overall share performance of the firm is a significant predictor of investment expenditure; for example, $SHR_{t-1}$ enters with a positive sign (0.016) and significant at the 10% level (see Model 5). This evidence combined with the findings of Table 6.6 reinforce the conclusion that top executives close to retirement or normal succession do not engage in discretionary behaviour by decreasing the firm's investment. Moreover, the result is invariant across different investment models. Overall, analysis fails to support the horizon hypothesis.

**Table 6.8: Estimated Coefficients Relating Investment Expenditure to Planned MSE Departures over the Entire MSE Career, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Dependent Variable | Change in Investment | | Level of Investment | | |
|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| T=-5 | -0.013 | -0.015 | -0.026 | 0.031 | 0.026 |
| | (0.438) | (0.367) | (0.155) | (0.223) | (0.240) |
| T=-4 | 0.043 | 0.043 | 0.007 | 0.052 | 0.045 |
| | (0.001) | (0.001) | (0.593) | (0.048) | (0.048) |
| T=-3 | 0.007 | 0.007 | 0.003 | 0.026 | 0.023 |
| | (0.405) | (0.406) | (0.740) | (0.234) | (0.190) |
| T=-2 | 0.009 | 0.008 | -0.008 | 0.014 | 0.012 |
| | (0.260) | (0.296) | (0.372) | (0.362) | (0.354) |
| T=-1 | -0.005 | -0.006 | -0.016 | 0.001 | -0.000 |
| | (0.483) | (0.374) | (0.054) | (0.907) | (0.996) |
| T=0 | -0.001 | 0.000 | -0.001 | 0.002 | 0.001 |
| | (0.864) | (0.925) | (0.875) | (0.921) | (0.917) |
| $SHR_{t-1}$ | - | 0.019 | 0.049 | 0.015 | 0.016 |
| | | (0.003) | (0.000) | (0.152) | (0.071) |
| $Investment_{t-1}$ | - | - | - | 1.519 | 1.177 |
| | | | | (0.000) | (0.000) |
| $Investment^2_{t-1}$ | - | - | - | -1.784 | -1.376 |
| | | | | (0.002) | (0.004) |
| Cash $Flow_{t-1}$ | - | - | - | - | 0.036 |
| | | | | | (0.231) |
| $Sales_{t-1}$ | - | - | - | - | 0.006 |
| | | | | | (0.228) |
| $Debt^2_{t-1}$ | - | - | - | - | -0.000 |
| | | | | | (0.724) |
| Constant | -0.066 | -0.061 | 0.137 | 0.003 | 0.003 |
| | (0.001) | (0.003) | (0.000) | (0.074) | (0.075) |
| Time Effects | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes |
| Serial Correlation(p) | - | - | - | 0.229 | 0.506 |
| Sargan (p) | - | - | - | 0.489 | 0.699 |
| Observations | 2141 | 2135 | 2438 | 1783 | 1668 |

**NOTES:**

1. p-values in parentheses
2. Models 1, 2 & 3 run through OLS; Models 4 & 5 run through GMM
3. Model 1 corresponds to equation (a); Models 2 & 3 correspond to equation (b); Models 4 & 5 correspond to equation (c).

Finally, Table 6.9 investigates further the cover-up hypothesis by replicating the regressions in Table 6.7 for forced departures. Under this definition of executive change, the size of the coefficient estimates drops as the Most Senior Executive reaches

departure (see Models (1) and (2)). Moreover, most of the investment cut-backs occurs during the final years as the threat of dismissal becomes more apparent and managers become more able to predict their termination date. The estimates of the "transition-year" and the "last full-year" are significantly different from the estimates of the rest year dummies (p-values of the $x^2$-statistic of the estimates' difference are less than 0.050).

This declining trend is almost maintained even after when the company's investment is measured in levels rather than changes in Model (3), the inclusion of the lagged dependent variable in Model (4), and the inclusion of the other possible determinants of investment in Model (5). All the coefficient estimates become, however, insignificant other than the estimate of the transition year, which is still negative and significant at less than the 10% level in Model (3), the 5% level in Model (4) and just fails the 10% level in Model (5). The latter finding resembles that of Murphy and Zimmerman (1993) who document that in the sample of non-routine CEO departures all the discretionary variables (e.g. R&D and capital expenditure) are lower in the transition year compared to their values in years –5 to –2. Taken together the results in Tables 6.6 and 6.9, analysis concludes that forced MSEs are likely to reduce the firm's investment growth rates particularly in their final year. This result remains unchanged under all investment models, including the Euler specification.

**Table 6.9: Estimated Coefficients Relating Investment Expenditure to Forced MSE Departures over the Entire MSE Career, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Dependent Variable | Change in Investment | | Level of Investment | | |
|---|---|---|---|---|---|
| | **Model 1** | **Model 2** | **Model 3** | **Model 4** | **Model 5** |
| T=-5 | 0.058 | 0.056 | -0.020 | 0.067 | 0.055 |
| | (0.004) | (0.006) | (0.243) | (0.145) | (0.157) |
| T=-4 | 0.011 | 0.010 | -0.025 | 0.006 | 0.006 |
| | (0.231) | (0.281) | (0.035) | (0.722) | (0.676) |
| T=-3 | 0.030 | 0.029 | -0.016 | 0.017 | 0.017 |
| | (0.002) | (0.002) | (0.144) | (0.299) | (0.246) |
| T=-2 | 0.009 | 0.009 | 0.007 | 0.003 | 0.004 |
| | (0.259) | (0.249) | (0.449) | (0.814) | (0.705) |
| T=-1 | -0.014 | -0.012 | 0.000 | -0.011 | -0.005 |
| | (0.063) | (0.085) | (0.996) | (0.430) | (0.643) |
| T=0 | -0.029 | -0.024 | -0.013 | -0.030 | -0.018 |
| | (0.000) | (0.001) | (0.097) | (0.033) | (0.106) |
| $SHR_{t-1}$ | - | 0.015 | 0.048 | 0.013 | 0.015 |
| | | (0.021) | (0.000) | (0.197) | (0.094) |
| $Investment_{t-1}$ | - | - | - | 1.548 | 1.195 |
| | | | | (0.000) | (0.000) |
| $Investment^2_{t-1}$ | - | - | - | -1.818 | -1.398 |
| | | | | (0.002) | (0.004) |
| $Cash\ Flow_{t-1}$ | - | - | - | - | 0.034 |
| | | | | | (0.258) |
| $Sales_{t-1}$ | - | - | - | - | 0.006 |
| | | | | | (0.225) |
| $Debt^2_{t-1}$ | - | - | - | - | -0.000 |
| | | | | | (0.741) |
| Constant | -0.068 | -0.064 | 0.136 | 0.003 | 0.003 |
| | (0.001) | (0.002) | (0.000) | (0.069) | (0.088) |
| Time Effects | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes |
| Serial Correlation(p) | - | - | - | 0.284 | 0.624 |
| Sargan (p) | - | - | - | 0.442 | 0.641 |
| Observations | 2141 | 2135 | 2438 | 1783 | 1668 |

**NOTES:**

1. p-values in parentheses
2. Models 1, 2 & 3 run through OLS; Models 4 & 5 run through GMM
3. Model 1 corresponds to equation (a); Models 2 & 3 correspond to equation (b); Models 4 & 5 correspond to equation (c).

To sum up both Sections 6.6.1 and 6.6.2, evidence suggest that CEOs' incentives to "save" their job, when the company is not doing well, are strong enough to push them to "cover-up" the company's deteriorating performance by lessening company investment.

Declining career concerns and increasing monetary incentives, on the other hand, do not appear to be able of engaging CEOs in opportunistic behaviour. Differences in the stock-based compensation of departing CEOs, however, may affect their incentives and in turn their investment decisions. It is this argument that becomes the central focus of the following section.

### *6.6.3 The Horizon Phenomenon and Managerial Stock Compensation*

Table 6.10 explores whether stock holdings, both ordinary and option, induce retiring managers to adopt a more long-term perspective. In particular, the analysis demonstrated that MSEs approaching a planned departure do not reduce investment. It may be the case, however, that MSEs with low equity stakes – as opposed to MSEs with high equity stakes - engage in opportunistic behaviour, as they have stronger incentives to do so. This was investigated by interacting the planned transition year dummy with the ORDINARY and the OPTION variables. The main rational for considering option holdings as well is that, although departing CEOs are not entitled to incentive shares after leaving office it is often the case that they are allowed to exercise these share options within six to twelve months following their departure, especially if they leave under amicable circumstances (a practice known in the US as "accelerated vesting"; see Murphy 1999).

Analysis concentrates on the first empirical specification used in the study. In particular, Models (1), (3) and (5) follow the first version of this empirical specification, i.e. the dummy indicator equals one (1) if the Most Senior Executive is at the transition year and zero (0) otherwise whereas in Models (2), (4) and (6) the dummy variable refers to the two last years in office. Under both versions, and similar to the previous sections,

the analysis commenced under the assumption of no underlying investment theory (i.e. Models (1) and (2)), it then added share profitability (i.e. Models (3) and (4)), and finally incorporated all the covariates present in the Euler specification (i.e. Models (5) and (6)).

If MSEs with low equity stakes reduce the company's investment rate when approaching a non-forced retirement or normal succession, then one should expect to see a positive coefficient on the interactive variable of holdings with the turnover dummy.

As indicated, the above predicted pattern holds only in the case of ordinary stock holdings, but the coefficient estimates are not significant at conventional levels. Incentive options, on the other hand, are both highly insignificant and of the unpredicted sign. Note that after the inclusion of the above two interaction terms the coefficient on the forced dummy is still negative but insignificant in Models (5) and (6). The negative correlation of forced turnover with the fraction of managerial ordinary stock ownership – that was demonstrated in Chapter 4 – may, however, make it more difficult to get precise coefficients. Overall, analysis demonstrates that the horizon phenomenon is not observed even for different sub-groups of planned departures (i.e. retiring MSEs with different levels of stock-based compensation). This in turn is inconsistent with the conclusions reached by Dechow and Sloan (1991), who report that R&D is less likely to be cut in a CEO's final years if he owns a substantial stake of the firm.

**Table 6.10: Estimated Coefficients of the Effect of Ordinary and Option Stock Holdings on the Horizon Phenomenon, Time-Period: 1990-1998, Sample: Top 460 London Stock Exchange Firms**

| Dependent Variable | Change in Investment | | Change in Investment | | Level of Investment | |
|---|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Planned Transition Year | -0.001 | - | -0.001 | - | 0.010 | - |
| | (0.873) | | (0.884) | | (0.593) | |
| Planned Last 2 Years | - | -0.002 | - | -0.003 | - | 0.003 |
| in Office | | (0.752) | | (0.688) | | (0.817) |
| Forced Transition Year | -0.030 | - | -0.025 | - | -0.011 | - |
| | (0.000) | | (0.000) | | (0.202) | |
| Forced Last 2 Years | - | -0.023 | - | -0.019 | - | -0.010 |
| in Office | | (0.000) | | (0.000) | | (0.166) |
| ORDINARY* | 0.210 | - | 0.189 | - | 0.079 | - |
| Planned Transition Year | (0.144) | | (0.182) | | (0.624) | |
| ORDINARY* | - | 0.149 | - | 0.133 | - | -0.006 |
| Planned Last 2 Years in Office | | (0.242) | | (0.292) | | (0.956) |
| OPTION* | -5.128 | - | -4.388 | - | -9.902 | - |
| Planned Transition Year | (0.402) | | (0.473) | | (0.294) | |
| OPTION* | - | -7.717 | - | -6.689 | - | -7.642 |
| Planned Last 2 Years in Office | | (0.135) | | (0.200) | | (0.347) |
| $SHR_{t-1}$ | - | - | 0.015 | 0.015 | 0.014 | 0.014 |
| | | | (0.022) | (0.020) | (0.101) | (0.099) |
| $Investment_{t-1}$ | - | - | - | - | 1.199 | 1.196 |
| | | | | | (0.001) | (0.001) |
| $Investment^2_{t-1}$ | - | - | - | - | -1.406 | -1.400 |
| | | | | | (0.005) | (0.005) |
| $Cash\ Flow_{t-1}$ | - | - | - | - | 0.034 | 0.035 |
| | | | | | (0.261) | (0.245) |
| $Sales_{t-1}$ | - | - | - | - | 0.006 | 0.006 |
| | | | | | (0.226) | (0.230) |
| $Debt^2_{t-1}$ | - | - | - | - | -0.000 | -0.000 |
| | | | | | (0.746) | (0.717) |
| Constant | -0.016 | -0.017 | -0.024 | -0.024 | 0.010 | 0.009 |
| | (0.415) | (0.390) | (0.222) | (0.227) | (0.071) | (0.121) |
| Time Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Serial Correlation(p) | - | - | - | - | 0.627 | 0.606 |
| Sargan (p) | - | - | - | - | 0.644 | 0.649 |
| Observations | 2119 | 2119 | 2113 | 2113 | 1642 | 1642 |

**NOTES:**

1. p-values in parentheses
2. Models 1, 2, 3 & 4 run through OLS; Models 5 & 6 run through GMM
3. Models 1 & 2 correspond to equation (a); Models 3 & 4 correspond to equation (b); Models 5 & 6 correspond to equation (c)

Finally, it is worth commenting that the results regarding the interaction variables are robust with respect to other alternative specifications of the ORDINARY variable. In particular, this study investigated the sensitivity of the results where ordinary stock holdings were measured by the value of the shares instead of the fraction of the total number of company shares. Again, the estimated coefficients of the interaction variables turned out highly insignificant under all models.

## 6.7 Concluding Remarks

This chapter has considered the consequences of executive departures for the firm's investment decisions. Specifically, the focus of the chapter was whether Most Senior Executives close to departure are likely to engage in opportunistic behaviour by reducing the company's investment rate, which is predicted by both the horizon and the cove-up hypotheses.

The contributions of the current study are threefold. Firstly, it discriminated between the above two propositions as well as provided a more powerful test of them than before, by identifying situation-specific factors under which managerial opportunistic behaviour is expected to be stronger. As a result, the horizon problem was investigated under planned departures and the cover-up phenomenon under forced departures, where – for the first time - a proper discrimination between the two types of executive departures was performed. Secondly, it examined whether retiring MSEs with low stock-based compensation are more likely to manipulate investment, an issue less often researched. Finally, it advanced prior literature on CEO turnover and investment behaviour by providing an underlying theory of investment at the absence of manipulation based on the standard Euler equation.

The results extend the earnings management literature within the context of CEO departures (e.g. Butler and Newman 1989; Murphy and Zimmerman 1993) in three main ways. Firstly, Most Senior Executives approaching retirement or normal succession do not behave opportunistically by lessening the firm's investment expenditure. This finding remains unchanged under both empirical specifications of no underlying investment theory and of a dynamic investment behaviour. Instead changes in the firm's investment rate have found to be linked with changes in the overall firm performance.

Secondly, and in contrast with the above, Most Senior Executives approaching a forced departure are likely to reduce investment in order to improve the firm's deteriorating performance and hence, delay their job termination or signal to the market inside information. The result is invariant across all investment specifications, including the Euler specification. Specifically, it was found that compared with the earlier years in an executive's career company investment rate decreases by 11% if he/she is at the year of the change. However, as emphasised in Section 6.5, one should always be aware that the systematic poor performance preceding forced departures confounds the interpretation of tests of earnings management. Indeed, poor performance preceding forced CEO replacement is likely to disguise attempts by the outgoing CEO to inflate earnings.

Finally, there seems to be no evidence that variations in stock-based compensation are associated with different actions of MSEs approaching an anticipated departure. The analysis demonstrated that, under all empirical models, the fraction of both ordinary and option stock holdings has no effect on the investment decisions of retiring MSEs. The above indicates that there may be other conditions under which the horizon predictions are expected to be true. In a similar vein with the above, a plausible case could be when

the departing managers do not continue in the firm, after leaving the post, in another role (e.g. non-executive directors) and therefore, their concerns are no longer linked with the firm's future.

Finally, another case could a CEO departure that does not follow the orderly process of CEO succession. Vancil (1987) uses the term "relay process" to describe a succession process in which the successor is identified several years before the CEO departs. In this case, the departing CEO has less discretion to manipulate investment expenditures, since the succeeding CEO shares many of the decision rights and has incentives to monitor the outgoing CEO's decisions. Dechow and Sloan (1991) provide evidence supporting the argument that when the outgoing CEO becomes Chairman of the board and the new CEO's previous position was President or Chief Operating Officer the horizon problem is mitigated. Of course, it may always be the case that - irrespective of all the above - retiring CEOs simply do not behave opportunistically.

# CHAPTER 7

# Conclusions

## 7.1 Summary of Findings

The main objective of this thesis has been to shed light on top executive turnover of large UK publicly quoted companies and the events surrounding the changeover. The quality and the quantity of this study's panel data provided a fuller and richer understanding of the determinants and the implications of executive turnover than has hitherto been provided.

Chapter 2 provided the theoretical foundations for the thesis by reviewing: a) the property rights theory, and b) the circumstances under which corporate governance issues become important. It then reviewed the relevant empirical literature and identified the gaps in current research.

Chapter 3 detailed the construction of the main data set of the largest 460 UK quoted companies by market capitalisation over an entire decade, i.e. from 1990 to 1998. The unique features of the data set are three. Firstly, it enabled the accurate identification of the company's leading executive and, for the first time in the UK, the modelling of Chairman turnover. Secondly, it allowed a more rigorous and comprehensive classification of top management changes, and hence the generation of more powerful tests of the issues considered in the thesis. Finally, based on this rich hand-collected

data set, Chapter 3 documented a number of novel and valuable information regarding the profile of the top UK management teams.

Chapter 4 considered a central corporate governance question: are changes in the top position associated with poor company performance? Consistent with the prior empirical literature, the econometric evidence here revealed a robust inverse relation between top executive turnover and past firm performance, both stock-based and accounting-based: MSEs are dismissed for poor performance. Secondly, it documented the circumstances under which poor performance may lead to a Most Senior Executive job separation. Three substantive results were established here. Firstly, firm performance must fall considerably to significantly increase the MSE dismissal likelihood. Secondly, the disciplining effect of leading executives has not become stronger over time: there was very little evidence that managers are disciplined more for poor corporate performance today than in the past. Finally, it was documented that MSEs with large equity stakes are as likely to be fired for poor performance as those with low equity stakes, suggesting that MSEs do not appear to become entrenched at high levels of equity ownership.

Chapter 5 considered the association of executive turnover and subsequent or concurrent changes in the composition of top management teams. In particular, it modelled Chairman turnover, which is less common in the US literature and entirely absent, despite its importance, in the UK literature. This chapter generated four substantive results. Firstly, it documented that Chairmen, like Most Senior Executives, are fired for poor performance, although this relation is less negative. This is in line with previous studies that document that management changes involving the top

executive are more important economic events than those not involving the top executive. Secondly, consistent with US evidence, analysis revealed that Chairmen are likely to leave office when the leading executive also turns over. More importantly, Chairmen are dismissed when the MSE departs, supporting the argument that their removal is a fundamental pre-condition for the successful implementation of the company's new plans. Thirdly, the positive association between Chairman turnover and Most Senior Executive departures is stronger when firms are performing badly or when000 the previous MSE is forced out, indicating that forced CEO resignations are more disruptive that natural turnovers. Finally, outside succession does not seem to be linked with further increases in the likelihood of Chairman turnover; this result persists even when companies perform badly or when the departing MSE is forced out.

Finally, Chapter 6 considered the investment decisions prior to the departure of leading executives who are inclined to engage in opportunistic behaviour. The analysis presented here is the first one based on UK data and adds to the recent US earnings management literature. Due to the richness of the data, this chapter tested – in a more rigorous way than before - two distinct hypotheses associated with earnings management predictions: a) the horizon hypothesis, and b) the cover-up hypothesis. Moreover, it modelled investment in two different ways: a) as a function of the final years of the Most Senior Executives, and b) as a function of their entire career. Finally, it provided an explicit underlying theory of optimal investment based on a dynamic Euler investment model. The results failed to support the horizon hypothesis: leading executives approaching retirement or normal succession do not seem to engage in discretionary behaviour by cutting back investment. Moreover, the scenario that such a behaviour could be observed for MSEs with low stock holdings was not supported.

Finally, it was reported that leading executives of poorly performing companies are likely to reduce investment in order to make-up for the company's deteriorating firm performance and delay their job termination supporting thus, the cover-up hypothesis.

## 7.2 Implications for Internal Governance

This thesis generated a number of valuable findings, the common message of which is that internal governance processes of UK companies seem to be in place. Nevertheless, they do not appear to be always or fully successful.

Indeed, there is strong evidence that CEOs or Chairmen of firms which under-perform are more likely to face discipline, i.e. lose their jobs, than top managers of firms which perform well. Furthermore, some Chairmen are ousted from the board following the dismissal of an inefficient CEO, indicating that the former did not perform their monitoring tasks successfully and hence ought to be penalised. Yet, senior management dismissal is reported to occur rarely; actual forced turnover CEO and Chairman rates are approximately 4% and 2% respectively. Firm performance must fall significantly in order to induce managerial discipline. The disciplining effect does not seem to have become stronger over time. Finally, CEOs approaching dismissal appear to engage in self-serving behaviour by rejecting value-maximising investment projects.

Consequently, the reform of internal governance institutions - although the subject of numerous government and other public policy reports since 1992 - is still an issue. So, what's to be done? Such questions are the subject of long debates and there exists no single or definite answer. In the light of the above, the following two suggestions may serve as broad - yet useful - guidelines:

a) Although there seems to be a universal suggested model of internal governance practices, flexibility in applying the specific rules is a must. In other words, companies should adhere to the various recommendations regarding the composition and operations of the board, the role of the institutional investors, the establishment of various committees within the board of directors (e.g. nomination, remuneration and audit committees) according to their own business circumstances, competitive conditions, life cycle, shareholder structures etc.

b) Internal governance practices should constantly evolve to meet changing conditions. As a work-in-progress, there is no static, final structure in corporate governance that every corporation should emulate. Again, companies should avoid rigid one-size-fits-all prescriptions, which might increase costs and/or fail to take under account the real issue of corporate governance and the differences in the relevant control mechanisms in different time periods. Experimentation should be expected and encouraged.

Nonetheless, good corporate governance cannot be guaranteed by codes or suggestions for best practice alone, not even by law. The disciplinary effect of the market economy (especially of the capital market and the stock exchange) is felt to be superior in comparison to strict regulatory interference. Moreover, good practice in corporate governance supposes commitment, professionalism and above all ethical behaviour. In summary, not the number of rules or codes, nor the "box ticking" to show the number of rules that have been applied, but substance over form is what distinguishes good governance from its poorer practices.

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# Appendix 1: List of Companies in the Data Set

1 AAH
2 ABBEY NATIONAL
3 AEGIS GROUP
4 AGGREGATE INDUSTRIES
5 AIRTOURS
6 ALBERT FISHER
7 ALBRIGHT & WILSON
8 ALLIANCE & LEICESTER
9 ALLIANCE UNICHEM
10 ALLIED COLLOIDS
11 ALLIED DOMECQ
12 AMEC
13 AMSTRAD
14 AMVESCAP
15 ANGLIAN GROUP
16 ANGLIAN WATER
17 ANITE GROUP
18 ANTOFAGASTA HDG.
19 APV
20 ARCADIA GROUP
21 ARGOS
22 ARJO WIGGINS APPLETON
23 ARRIVA
24 ASDA GROUP
25 ASHLEY (LAURA)
26 ASHTEAD GROUP
27 ASPREY
28 ASSOCIATED BRITISH FOODS
29 ASSOCIATED BRITISH PORTS
30 ASTEC (BSR)
31 ASTRAZENECA
32 ATTWOODS
33 AUTOMATED SECURITY
34 AVIS EUROPE
35 BAA
36 BABCOCK INTERNATIONAL
37 BAIRD (WILLIAM)
38 BANK OF SCOTLAND
39 BARCLAYS
40 BARRATT DEVELOPMENTS
41 BASS
42 BBA GROUP
43 BEAZER
44 BEAZER GROUP
45 BERISFORD
46 BERKELEY GROUP
47 BET
48 BG
49 BIBBY
50 BICC
51 BILLITON
52 BILTON
53 BIOCOMPATIBLES
54 BLENHEIM GROUP
55 BLUE CIRCLE INDUSTRIES
56 BOC GROUP
57 BODDINGTON
58 BODY SHOP INTERNATIONAL
59 BODYCOTE INTERNATIONAL.
60 BOOKER
61 BOOTS
62 BOWTHORPE
63 BP AMOCO
64 BPB
65 BRADFORD PROPERTIES
66 BRAKE BROTHERS
67 BRENT WALKER
68 BRITANNIC ASSURANCE PLC
69 BRITISH & COMMONWEALTH
70 BRITISH AEROSPACE
71 BRITISH AIRWAYS
72 BRITISH AMERICAN TOBACCO
73 BRITISH BIOTECH
74 BRITISH BORNEO OIL & GAS
75 BRITISH ENERGY
76 BRITISH LAND
77 BRITISH SKY BROADCAST
78 BRITISH STEEL

# Appendix 1 - Cont.

79 BRITISH TELECOMMS.
80 BRITISH VITA
81 BRIXTON ESTATE
82 BROWN (N) GROUP
83 BRUNEL HOLDINGS
84 BRYANT GROUP
85 BTG
86 BTP
87 BTR
88 BUNZL
89 BURFORD HDG.
90 BURMAH CASTROL
91 CABLE & WIRELESS
92 CABLE & WIRELESS COMMS.
93 CADBURY SCHWEPPES
94 CAIRN ENERGY
95 CALEDONIA INVESTMENTS
96 CAP.SHOP.CENTS.
97 CAPITA GROUP
98 CAPITAL & COUNTIES
99 CAPITAL RADIO
100 CARADON
101 CARE FIRST GROUP
102 CARLTON COMMUNICATIONS
103 CATTLES
104 CELLTECH
105 CENTRAL INDEPENDENT T.V.
106 CENTRICA
107 CGU
108 CHARTER CONSOLIDATED
109 CHELSFIELD
110 CHUBB SECURITY
111 CLOSE BROTHERS
112 CLYDE PETROLEUM
113 CMG
114 COATS VIYELLA
115 COBHAM
116 COLT TELECOM
117 COMPASS GROUP
118 COOKSON GROUP
119 CORDIANT COMMS. GROUP
120 COSTAIN GROUP
121 COUNTRYWIDE
122 COURTAULDS
123 COURTAULDS TEXTILES
124 CRODA INTERNATIONAL
125 CTL.TRAN.RENTAL
126 DAILY MAIL'A'
127 DANKA BUSSINESS SYSTEMS
128 DAVY CORPORATION
129 DAWSON INTERNATIONAL
130 DE LA RUE
131 DELTA
132 DEVRO
133 DFS FURNITURE CO.
134 DIAGEO
135 DIPLOMA
136 DIXONS GP.
137 DOWTY GROUP
138 DUNHILL HDG.
139 EAST MIDLANDS ELECTRICITY
140 EAST SURREY HDG.
141 EASTERN GROUP
142 ELECTROCOMPONENTS
143 ELEMENTIS
144 EMAP
145 EMI GROUP
146 ENERGY GROUP
147 ENGLISH CHINA CLAYS
148 ENTERPRISE OIL
149 EURASIA MINING
150 EUROMONEY PUBLICATIONS
151 EUROTHERM
152 EUROTUNNEL UNITS
153 FAIREY GROUP
154 FERRANTI INTERNATIONAL
155 FINE ART DEVELOPMENTS
156 FIRST GROUP

# Appendix 1 - Cont.

157 FIRST LEISURE
158 FIRST NATIONAL
159 FISONS
160 FITCH LOVELL
161 FKI
162 FLEXTECH
163 FORTE
164 FOSECO
165 FROGMORE ESTATES
166 GALLAHER GROUP
167 GARTMORE PLC
168 GEEST
169 GENERAL ACCIDENT
170 GENERAL CABLE
171 GENERAL ELECTRIC
172 GESTETNER
173 GKN
174 GLAXO WELLCOME
175 GLYNWED
176 GRANADA GROUP
177 GRAND METROPOLITAN
178 GREAT PORTLAND ESTATES
179 GREAT UNIVERSAL.STORES
180 GREENALLS GPOUP
181 GREENE KING
182 GREYCOAT
183 GUARDIAN ROYAL EXCHANGE
184 HALIFAX GROUP
185 HALMA
186 HAMBROS
187 HAMM. PROP INV &DEV CORP
188 HANSON
189 HARTSTONE GROUP
190 HAWKER SIDDELEY
191 HAYS
192 HAZLEWOOD FOODS
193 HEATH (CE)
194 HEPWORTH
195 HEWDEN-STUART
196 HEYWOOD WILLIAMS
197 HICKSON INTL.
198 HIGHLAND DISTILLERS
199 HILLSDOWN HDG.
200 HILTON GROUP
201 HOSKYNS GROUP
202 HOUSE OF FRASER
203 HOWDEN GROUP
204 HSBC HOLDINGS
205 HUNTINGDON LIFE SCS. GROUP
206 HYDER
207 IBSTOCK
208 ICELAND GROUP
209 IMI
210 IMP. CHEMICAL INDUSTRIES
211 IMPERIAL TOBACCO GPOUP
212 INCHCAPE
213 INSPEC
214 INTERNATIONAL ENERGY
215 INVENSYS
216 INVERGORDON DISTILLERS
217 JIB
218 JJB SPORTS
219 JOHNSON MATTHEY
220 KALON GROUP
221 KERSHAW (A)
222 KINGFISHER
223 KLEINWORT BENSON
224 KWIK SAVE GROUP
225 KWIK-FIT HDG.
226 LAING PROPERTIES
227 LAIRD GROUP
228 LAND SECURITIES
229 LAPORTE
230 LASMO
231 LEGAL & GENERAL
232 LEIGH INTERESTS
233 LEP GROUP
234 LEX SERVICE

# Appendix 1 - Cont.

235 LIBERTY INTERNATIONAL
236 LIFE SCIENCES
237 LIMIT
238 LLOYDS BANK
240 LLOYDS TSB GROUP
241 LOGICA
242 LDN & MANCHESTER GROUP
243 LONDON ELECTRICITY
244 LDN. INTERNATIONAL GROUP
245 LDN. MERCHANT SECURITIES
246 LONMIN
247 LOW & BONAR
248 LOW (WM)
249 LUCAS INDUSTRIES
250 LUCASVARITY
251 LWT (HOLDINGS)
252 M&G GROUP (HDG.)
253 MACALLAN-GLVT.
254 MAI
255 MAN (E D & F) GROUP
256 MANPOWER
257 MANWEB
258 MARKS & SPENCER
259 MARLEY
260 MARSTON THOMPSON
261 MATTHEW CLARK
262 MAXWELL COMMUNICATIONS
263 MCKECHNIE
264 MECCA LEISURE
265 MEDEVA
266 MEGGITT
267 MENZIES (JOHN)
268 MEPC
269 MERANT
270 MERCURY ASSET MNG.
271 MERISTEM
272 MERSEY DOCKS
273 MEYER INTERNATIONAL
274 MFI FURNITURE
275 MIDLAND
276 MIDLAND & SCOTTISH
277 MIDLANDS ELETRICITY
278 MILLENNIUM & COPTH. HOTELS
279 MINORCO
280 MIRROR GROUP
281 MISYS
282 ML LABORATORIES
283 MONUMENT OIL & GAS
284 MORGAN CRUCIBLE
285 MORRISON (WM) SMKTS
286 MOUNT CHARLOTTE
287 MOWLEM (JOHN)
288 NATIONAL EXPRESS
289 NATIONAL GRID
290 NATIONAL POWER
291 NAT. WEST. BANK
292 NEWS INTERNATIONAL
293 NEWSQUEST
294 NEXT
295 NFC
296 NORCROS
297 NORTHERN ELECTRIC
298 NORTHERN FOODS
299 NORTHERN ROCK
300 NTH. WATER GROUP
301 NORWEB
302 NORWICH UNION
303 NURDIN & PEACOCK
304 NU-SWIFT
305 NYCOMED AMERSHAM
306 NYNEX CABLECOMMS UNITS
307 OCEAN GROUP
308 ORANGE
309 PACE MICROTECHNOLOGY
310 PARKFIELD GROUP
311 PEARL GROUP
312 PEARSON
313 PEEL HOLDINGS

# Appendix 1 - Cont.

314 PEN.&ORNTL.DFD.
315 PENNON GROUP
316 PENTLAND GROUP
317 PERPETUAL
318 PERSIMMON
319 PHOTO-ME INTERNATIONAL
320 PIC INTERNATIONAL GROUP
321 PILKINGTON
322 POLLY PECK INTERNATIONAL
323 PORTALS GROUP
324 POWELL DUFFRYN
325 POWERGEN
326 POWERSCREEN
327 PREMIER FARNELL
328 PREMIER OIL
329 PROUDFOOT
330 PROVIDENT FINL.
331 PRUDENTIAL CORPORATION
332 QUEENS MOAT HOUSE
333 RACAL ELECTRONIC
334 RAILTRACK GROUP
335 RANK GROUP
336 RECHEM ENV.SVS.
337 RECKITT & COLMAN
338 REDLAND
339 REED INTERNATIONAL
340 REFUGE GROUP
341 RENTOKIL INITIAL
342 REUTERS GROUP
343 REXAM
344 RIO TINTO (REG)
345 RJB MINING
346 RMC GROUP
347 ROLLS-ROYCE
348 ROMTEC
349 ROSEHAUGH DEAD
350 ROTHMANS INTERNATIONAL
351 ROYAL & SUN ALLIANCE INS.
352 ROYAL BANK OF SCOTLAND
353 ROYAL INSURANCE HDG
354 RUGBY GROUP
355 SAFEWAY (UK)
356 SAGE GROUP
357 SAINSBURY (J)
358 SALVESEN (CHRIS.)
359 SAVOY HOTEL
360 SCAPA GROUP
361 SCHRODERS
362 SCOTIA HOLDINGS
363 SCOTTISH & NEWCASTLE
364 SCOTT. & SOUTHERN ENERGY
365 SCOTTISH POWER
366 SEARS
367 SECURICOR
368 SEDGWICK GROUP
369 SEEBOARD
370 SEMA GROUP
371 SENIOR ENGINEERING GROUP
372 SEVERN TRENT
373 SHANKS & MCEWAN
374 SHELL TRANSPORT & TRADING
375 SIGNET GROUP
376 SIMON GROUP
377 SLOUGH ESTATES
378 SMITH & NEPHEW
379 SMITH (DAVID S)
380 SMITH (WH) GROUP
381 SMITHKLINE BEECHAM
382 SMITHS INDUSTRIES
383 SOMERFIELD
384 SOUTH AFRICAN BREWERIES
385 SOUTH WALES ELECTRICITY
386 SOUTH WESTERN ELECTRICITY
387 SOUTHERN ELECTRIC
388 SOUTHERN WATER
389 SPIRAX-SARCO
390 SPRING RAM CORPORATION
391 ST IVES

# Appendix 1 - Cont.

392 ST.JAMES'S PLACE CAPITAL
393 STAGECOACH HDG.
394 STAKIS
395 STANDARD CHARTERED
396 STAVELEY INDUSTRIES
397 STC
398 STEETLEY
399 STOREHOUSE
400 SUN LIFE & PROVINCIAL HLD.
401 SUN LIFE CORPORATION
402 SUTER
403 SWALLOW GROUP
404 TARMAC
405 TATE & LYLE
406 TAYLOR WOODROW
407 TELEGRAPH
408 TELEWEST COMMUNICATIONS
409 TESCO
410 THAMES TV
411 THAMES WATER
412 THISTLE HOTELS
413 THORN
414 TI GROUP
415 TIBBETT & BRITTEN
416 TOMKINS
417 TOOTAL GROUP
418 TRADE INDEMNITY
419 TRAFALGAR HOUSE
420 TRANSPORT DEVELOPMENTS
421 TRAVIS PERKINS
422 TRINITY INTERNATIONAL
423 TT GROUP
424 ULTRAMAR
425 UNIGATE
426 UNILEVER (UK)
427 UNITECH
428 UNITED BISCUITS
429 UNITED UTILITIES
430 UNITED.NEWS & MEDIA
431 VENDOME LUXURY
432 VICKERS
433 VICTORY CORPORATION PLC.
434 VIRIDIAN GROUP
435 VODAFONE AIRTOUCH
436 VSEL
437 WACE GROUP
438 WASSALL
439 WASTE MNG. INTERNATIONAL
440 WATES CITY LONDON
441 WEIR GROUP
442 WELLCOME
443 WESSEX WATER
444 WESTLAND GROUP
445 WETHERSPOON (JD)
446 WHITBREAD & CO PLC
447 WICKES
448 WILLIAMS HOLDINGS
449 WILLIS CORROON
450 WILSON BOWDEN
451 WILSON(CONNOLLY)
452 WIMPEY (GEORGE)
453 WOLSELEY
454 WOLV.&DUDLEY
455 WOOLWICH
456 WPP GROUP
457 YALE & VALOR
458 YORKSHIRE ELECTRICITY
459 YORKSHIRE WATER
460 YULE CATTO

# Appendix 2: Variables in the Data Set

| | |
|---|---|
| **ADATE** | Announcement date of the turnover event |
| **APPOINTMENT** | Appointment date at the particular position of Chief Executive Officer, Chairman or Managing Director |
| **ASSETS** | Total assets employed |
| **CBD** | Company birth date |
| **CCHANGE:** | The circumstances of the turnover event as discussed in the FT articles |
| **CDD** | Company death date |
| **CEO** | The company's Chief Executive Officer |
| **CHAIR** | The company's Chairman |
| **COMPANY** | Company name |
| **CSCP** | Total UK capital stock in current prices |
| **CS95** | Total UK capital stock in 1995 prices |
| **DEBT** | Total loan capital |
| **DEPRECIATION** | Provision for amounts written off, and depreciation of tangible fixed assets |
| **DESTINATION** | Destination of departing manager |
| **DSCODE** | Company Datastream code |
| **EBIT** | Earnings before interest and tax |
| **E/N** | Type of position (i.e. executive or non-executive) |
| **EQUITY** | Total number of company ordinary shares in issue |
| **GVB** | Total land and buildings - gross |
| **GVP** | Total plant and machinery - gross |
| **ICODE-1** | 1-digit industrial classification code |
| **ICODE-3** | 3-digit industrial classification code |
| **INCENTIVE** | Number of managerial option holdings |
| **INVESTMENT** | Total purchases of new fixed assets |
| **ITYPE** | Industry description |
| **LDATE** | Actual date of departure |
| **MBD** | Managerial birth date |
| **MD** | The company's group Managing Director |

# Appendix 2 – Cont.

| | |
|---|---|
| **MV** | Market value on 1st January of each year |
| **NAME** | Managerial Name |
| **NVB** | Total land and buildings - net |
| **NVP** | Total plant and machinery - net |
| **OPROFITA** | Operating profit –Adjusted |
| **ORDINARY** | Number of managerial ordinary holdings |
| **RCHANGE** | The reason of the turnover event as stated by the company and reported in the FT articles |
| **REBIT** | Industry adjusted accounting returns |
| **RI** | Company's return index on 1st January of each year |
| **RSHR** | Industry adjusted stock returns |
| **SALES** | Total sales figure |
| **SUCCESSION** | Type of managerial succession (i.e. insider vs. outsider) |
| **UP** | Company unadjusted share price on 1st January of each year |

# Abbreviations

| | |
|---|---|
| A | All |
| AMEX | American Stock Exchange |
| AR | Accounting Ratios |
| CAR | Cumulative Abnormal Returns |
| CEO | Chief Executive Officer |
| CFO | Chief Financial Officer |
| COO | Chief Operating Officer |
| EPS | Earnings Per Share |
| F | Forced |
| FT | Financial Times |
| GMM | Generalised Method of Moments |
| INV | Investment |
| JMD | Joint Managing Director |
| LHS | Left Hand Side |
| LSPD | London Share Price Database |
| MD | Managing Director |
| MSE | Most Senior Executive |
| NF | Non-Forced |
| NYSE | New York Stock Exchange |
| OLS | Ordinary Least Squares |
| PWC | PriceWaterhouseCoopers |
| R&D | Research & Development |
| RHS | Right Hand Side |
| ROA | Return on Assets |
| ROE | Return on Equity |
| SPRF | Share Performance |
| UK | United Kingdom |
| US | United States |
| WSJ | Wall Street Journal |

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